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**EMOTIONAL PROBLEMS IN
PREADOLESCENCE**

**Immigrant background, school
difficulties, and family factors**

**Norwegian Institute of Public Health
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SUMMARY

This thesis investigates emotional problems in preadolescents with immigrant background. Possible risk and protective factors for emotional problems across immigrant and non-immigrant background, as well as across specific immigrant groups were investigated, with particular emphasis on family and academic factors. It is important to undertake studies of immigrants and children of immigrants from an early age. Also, cultural differences may lead to different definitions and expressions of emotional problems. Immigrant populations may be more vulnerable to risk factors such as poverty, and there is a higher likelihood that their problems will go undetected by teachers. Moreover, their parents may lack general knowledge about how to navigate the school and mental health-care systems in order to provide help for their children. The school is an important arena for the social integration of immigrant children, and successful school adaption is one way to increase minorities' influence and participation in society.

One thousand six hundred and three 10 to 12-year olds from the two largest cities in Norway (Oslo and Bergen) were invited to the first wave of the «Youth, Culture and Competence» study. Participants were strategically sampled to provide a high percentage of immigrants. The participation rate was approximately 65 %, and participants were grouped according to parental nativity. Participants were divided into three groups: (1) immigrant background (defined by both parents and most grandparents being born abroad; also referred to as minority), (2) non-immigrant background (defined by both parents and most grandparents born in Norway; also referred to as ethnic Norwegian or majority), and (3) dual ethnic status (defined as having one immigrant and one non-immigrant parent). Only those with immigrant and non-immigrant background were included in the thesis, because those with dual ethnic status had a mix of immigrant and non-immigrant backgrounds that may require especial attention. Of the included participants, 47 % had immigrant background (n = 427). Of those with immigrant background, all had non-Western immigrant background, and the three largest national groups were from: Pakistan (n = 124), Turkey (n = 45) and Sri Lanka (n = 43). A self-administered questionnaire containing questions about mental health (including the SDQ, parental achievement values, EMBU-C, and the General Everyday Hassles scale) was administered to 5th to 7th graders in 14 schools during school lessons, as well as after school for those from Turkey and Sri Lanka. Background variables such as gender, ethnic status (i.e. majority/minority), grade level (age), perceived economic hardship (SES), and city background (Oslo/Bergen) were adjusted for. In addition, school-related

variables were controlled for, when appropriate, in order to elucidate the unique relationships among the main variables of interest in the study.

This thesis comprises three papers applying different theoretical and methodological approaches to address aspects of emotional problems in preadolescence across ethnic backgrounds. It contributes to the research field encompassing preadolescents with immigrant background, a subpopulation that is often underrepresented in mental health research. The first paper represents the first approach by stratifying the sample into four different groups (immigrant boys, immigrant girls, non-immigrant boys, and non-immigrant girls), and investigating whether home and school hassles (difficulties related to the home and the school) could account for higher levels of emotional symptoms in immigrant boys, as compared to the three other groups. Findings suggest that school hassles, but not home hassles, accounted for the higher levels of emotional symptoms in boys with immigrant background, as compared to boys with non-immigrant background.

The second paper describes differences among immigrants and non-immigrants with respect to child-reported parental achievement values (i.e., how strongly parents emphasize the child's achievement), parental comparison (i.e., parents' explicit comparison of their child's achievement with that of others), and emotional problems. Findings suggest that the relationship between parental achievement values and emotional problems was partly mediated through comparison, across immigrant and non-immigrant background. Only among preadolescents with immigrant background, comparison was linked to emotional problems. The third paper presents latent classes of emotional problems in preadolescents, and identifies three mutually distinct subgroups: Healthy, Borderline and Distressed. Findings suggest that the odds of belonging to the Distressed-subgroup, rather than the Healthy-subgroup, were at least twice as high for preadolescents with immigrant background, compared to those with non-immigrant background.

Overall, the findings indicate that both parental achievement values and comparison may be risk factors for emotional problems in preadolescents with immigrant background regardless of gender, while school hassles may be related to increased emotional problems in boys with immigrant background. Furthermore, results indicate that already during preadolescence, immigrants and children of immigrants in Norway may be at higher risk for developing emotional problems. In sum, this thesis is a contribution to the research on the emotional health of specific immigrant groups in Norway, and an important addition to the research on Pakistani, Turkish and Sri Lankan mental health in Norway.

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During my time as an aspiring PhD student and while dreaming about conducting research on immigration, I told myself that I would contribute to: study the positive aspects of immigration, such as resilience and family cohesion, and *not* the problematic aspects; focus on the diversity of immigrant groups and *not* lump immigrants into one group; refer to the Norwegian-born children of immigrants, as “Norwegians”, and *not* as immigrants; and also study “Western” immigrants and *not* only non-Western immigrants. As the reader may already have noted from the summary, this work took a different turn than my initial research interests and ideals. Still, it is with pride, joy, relief and humbleness that I now hold my thesis. Humbleness for all involved in this work, especially the preadolescents and families who participated in this study, and pride for molding the data and thoughts into a product that reflects my research values. I have described the challenge of immigrant research as a political minefield, filled with politically correct and arbitrary categorizations, both equally constraining. Another challenge has been to combine two lovely small children, at times not interested in sleeping during the nights, with the pressing demands of writing this thesis during day-time. Today, I am proud of having “made it after all”, as the encouraging mantra from my fellow NIPH PhD survivors goes.

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LIST OF PAPERS

Paper I

Alves, D. E., Røysamb, E., Oppedal, B., & Zachrisson, H. D. (2011). Emotional problems in preadolescents in Norway: The role of gender, ethnic minority status, and home- and school-related hassles. *Child and Adolescent Psychiatry and Mental Health*, 5:37.

Paper II

Alves, D. E., Gustavson, K., Røysamb, E., Oppedal, B., Zachrisson, H.D. (2013). Parental achievement values, comparison, and emotional problems in preadolescents with immigrant and non-immigrant background in Norway. *Submitted to Scandinavian Journal of Child and Adolescent Psychiatry and Psychology*.

Paper III

Alves, D. E., Corliss, H. L., Røysamb, E., Zachrisson, H.D., Oppedal, B., Gustavson, K. (2013). Risk of emotional distress is higher in preadolescents with immigrant compared to non-immigrant background. *Submitted to Scandinavian Journal of Child and Adolescent Psychiatry and Psychology*.

**In Papers II and III, the font and line spacing have been adapted from the original submitted versions in order to aid reading.*

1. BACKGROUND

The background includes an overview of emotional problems and their prevalence in preadolescents of immigrant and non-immigrant background. The first part describes the phenomenology of emotional problems in children and adolescents *in general*, while the second part is specifically related to immigrants. The phenomenology of emotional problems is illustrated by the pathological extreme of the “emotional problem-continuum”, the emotional disorders. Further, the second part describes the immigrant context in Norway, with a brief presentation of three immigrant groups whose roles are central to this thesis: Pakistanis, Turks and Tamils from Sri Lanka. When presenting the literature and research on emotional problems, the focus is on gender differences, child/adolescent self-reports (as opposed to reports from parents or teachers), and comparison between immigrant and non-immigrants who live in the same country. In addition, risks and protective factors for emotional problems in preadolescence are emphasized, especially those related to family, school and the interaction between them, such as parental achievement values and comparison. Urie Bronfenbrenner’s (1979) bioecological model is used to contextualize these factors. Finally, important gaps in the field are presented, and adapted as the aims of this thesis.

1.1. Emotional Problems in Preadolescents in General

Preadolescence is defined approximately as the period between the ages of 9 and 12 (Merriam-Webster, 2011). To support the scarce research on emotional problems in preadolescence, it is necessary to rely on the larger body of research from both childhood and adolescence. This is for two reasons. Firstly, there is less information about emotional problems in preadolescence, as compared to adolescence. Secondly, knowledge about the phase that succeeds childhood and precedes adolescence adds to the knowledge about the development of emotional problems.

1.1.1. Phenomenology

Psychopathology in childhood and adolescence is typically divided into two main groups: emotional and behavioral problems (Zahn-Waxler, Klimes-Dougan, & Slattery, 2000). Emotional problems consist of feelings of sadness, guilt, fear and worry. Because emotional problems are directed inwards, they are often referred to as “internalizing”. In contrast, behavioral problems, are directed outwards towards the environment, and referred to

as “externalizing” (Zahn-Waxler et al., 2000). Below are two cases that illustrate the phenomenology of emotional problems (Hauser, Allen, & Golden, 2006):

Billy started to complain of feeling ill in the mornings. At first he just played hooky or refused outright to go to school. He stayed home all day, avoiding other children. He argued a lot with his mother and picked on Kenny [his little brother], for whom he often babysat. (p. 161).

Sandy had always been a very good and hardworking student, but now her grades began to slip, and at school she seemed so depressed that one of her teachers called home to find out what was wrong. (p. 210).

The phenomenology of depression changes over the life cycle. Compared to adolescents, preadolescents report more somatic complaints, psychomotor agitation, separation anxiety and phobias (Zahn-Waxler et al., 2000). Adolescents, on the other hand, have more lack of pleasure (anhedonia), hopelessness, and sleep too much (hypersomnia). Further, adolescents are more prone to experience episodes of major depression, and research findings suggest that adolescent-onset (i.e., early onset) is a more severe and pernicious form of the disorder, as compared to major depression seen first in adulthood (Lieb, Isensee, Hofler, Pfister, & Wittchen, 2002).

Emotional (or internalizing) problems can be studied both as categorical and continuous phenomena. According to the categorical definition, emotional problems are either present or absent. This definition is typically used in clinical, epidemiological and health political settings, in which people are classified as having a diagnosis if their symptoms meet pre-specified criteria. Three broad types of emotional disorders will be presented below: anxiety, depression and somatizing disorders. Although this thesis does not focus on categorical emotional disorders, it is important to present the phenomenology of disorders. This is because a substantial part of the research literature, in which our findings are anchored, concerns specific emotional disorders, particularly depression.

1.1.2. Emotional Problems as Categorical Disorders

Diagnostic manuals present the most severe types of categorical emotional problems: Emotional disorders. By endorsing a certain number of predefined symptoms, during a predefined period of time, one is given a categorical diagnosis. The most common anxiety disorders in childhood and adolescence are separation anxiety disorder, generalized anxiety disorder, and specific phobias (Merikangas, 2005). Separation anxiety disorder refers to

excessive worry about separation from primary caretakers or from home, and can include symptoms like somatic complaints, tearfulness, nightmares and school refusal (Merikangas, 2005). Generalized anxiety disorder refers to pervasively excessive worry in different areas of life, and is related to sleep disturbance, restlessness, muscle tension and irritability (Merikangas, 2005). Billy's sudden symptoms, such as school refusal, avoidance and irritability, may match an anxiety disorder, if additional information also matches the necessary criteria for diagnosis (Zahn-Waxler et al., 2000). It is common for anxious children to worry excessively about school performance, the approval of others, and catastrophes such as nuclear war, tsunamis and earthquakes. Among anxiety disorders are specified phobias and obsessive-compulsive disorder. Specified phobias include and refer to excessive fear of objects and events, as well as social phobia which refers to excessive fear of unfamiliar social settings, and especially of the evaluation of others (Zahn-Waxler et al., 2000). Less common than the anxiety disorders above, obsessive-compulsive disorder consists of repetitive disruptive thoughts or "obsessions", and behaviors or "compulsions" (American Psychiatric Association, 2013).

Major depressive disorder refers to depressed mood or loss of interest accompanied by at least four additional symptoms of depression during at least two weeks (American Psychiatric Association, 2013). Symptoms include irritable mood or somatic complaints, social withdrawal or diminished interest in nearly all activities, significant or unexpected weight changes or somatic complaints, psychomotor agitation or retardation, fatigue or loss of energy, feelings of worthlessness or excessive guilt, lack of concentration, and suicidal thoughts (American Psychiatric Association, 2013). Sally's case, presented above, appears to fit this disorder, as Sally's teacher noted a sudden change in her mood indicating lack of positive emotion, accompanied by a marked decrease in academic performance. Another less common type of depressive disorder, is dysthymic disorder, a milder, but more persistent and chronically depressed or irritable mood, in which cognitive or vegetative symptoms may also be present (American Psychiatric Association, 2013).

Somatizing disorders are defined as complaints of physical symptoms unexplainable by known somatic causes, and are related to social impairments that interfere in normal social interaction (American Psychiatric Association, 2013). Most commonly characterized by headaches and joint pains, they can cause a child to undergo painful medical investigations in search of the cause of pain. Outside of the home, children with somatizing disorder are usually described as shy and compliant. They may avoid school, and consistently express emotional distress through somatic complaints. Depression and anxiety are the most common disorders associated with somatizing disorders (American Psychiatric Association, 2013).

1.1.3. Emotional Problems as a Continuous Dimension

As mentioned earlier, the categorical definition of emotional problems entails dichotomizing people into two distinct groups: those who have problems/disorders, and those who do not. In contrast, the continuous definition operationalizes emotional problems as a dimensional phenomenon. According to this definition, emotional problems are manifested along a continuum, from low to high levels of symptoms. This definition is frequently used by researchers who collect reports of emotional symptoms. Whether categorical or continuous definitions of emotional problems are preferred depends on the purpose of the information being used. Categorical definitions are useful when investigating the prevalence of a diagnosis, while continuous definitions capture a broader range of problem behavior. Even at subclinical levels, or at levels below what is necessary to meet diagnostic criteria, emotional symptoms still have been related to suffering and life impairment (Zahn-Waxler et al., 2000). Furthermore, from a methodological point of view, a continuous definition has the advantage of increasing statistical power, as well as both decreasing spurious statistical significance and over/underestimation of effect size (MacCallum, Shaobo Zhang, Kristopher J Preacher, & Derek D Rucker, 2002).

In this study, the continuous definition of emotional problems was adopted, in order to capture a larger range of problem behavior. The terms “emotional” and “internalizing” problems are used interchangeably, and emotional disorders are perceived as the high or severe end of the emotional problem-continuum. Studies assessing the prevalence of emotional problems in preadolescents have used a variety of scales. The emotional symptoms scale of the Strengths and Difficulties Questionnaire, (SDQ), is used throughout this thesis (Goodman, 2001). Although shorter, the SDQ has been evaluated as equivalent to the Child Behavior Checklist and Youth Self Report (Koskelainen, Sourander, & Kaljonen, 2000). In addition, the SDQ has shown adequate psychometric properties (Obel et al., 2004; Woerner et al., 2004), particularly the emotional symptoms scale (Heiervang, Goodman, & Goodman, 2008b; Richter, Sagatun, Heyerdahl, Oppedal, & Roysamb, 2011; Van Roy, Veenstra, & Clench-Aas, 2008). There has also been support for the measurement invariance of emotional problems across immigrant and non-immigrant background in adolescence (Richter et al., 2011; Van Roy et al., 2008). Furthermore, the SDQ has been translated to many languages and validated in several cultural contexts and ethnic groups (Klineberg et al., 2006; Mullick & Goodman, 2001; Obel et al., 2004; Oppedal, Roysamb, & Heyerdahl, 2005; Ronning, Handegaard, Sourander, & Mørch, 2004). The self-report version of the SDQ (SDQ-S) is

generally recommended from age 11 (see www.sdq.info). Younger preadolescents may lack the cognitive skills to assess their own mental health in general terms, without overemphasizing their immediate emotional state. This can represent a potential shortcoming of preadolescent self-reports on emotional problems. On the other hand, reports by parents and teachers may underestimate and under-diagnose emotional problems, as compared to children's self-reports (Heiervang et al., 2008b; Mellor, 2005; Meltzer, Gatward, Goodman, & Ford, 2003), although there are exceptions (Vollebergh et al., 2005).

The emotional symptoms scale of the SDQ has several advantages, such as brevity and empirical support, although it also loses important nuances when different disorders (depression, anxiety, and somatizing disorders) are collapsed into one scale. As a scale, emotional problems can be seen as unidimensional (i.e., as measuring one construct: emotional problems), or multidimensional (i.e., as measuring multiple underlying constructs such as depression and anxiety). Compared to unidimensional scales, multidimensional ones tend to have lower reliability, since they are more heterogeneous (Widhiarso, 2010). This shortcoming can be reduced by studying the items of the emotional problem scale individually (Muthén, 2003). Both perspectives (i.e., unidimensional and multidimensional) are included in this thesis. In sum, the SDQ's brevity and its widely assessed cross-cultural application and validation, renders the self-report version of the emotional symptoms scale a particularly suitable instrument to assess emotional problems in preadolescents with immigrant background.

1.1.4. Prevalence

Starting with the prevalence of disorders, the prevalence for the full range of anxiety disorders in children has been estimated to be between 6-18 %, although the inclusion of functional impairment and subjective distress criteria has shown to dilute rates of anxiety disorders (Costello, Egger, & Angold, 2005). Specific anxiety disorders in children have been well documented as age-related, while specific phobias have been described in children of all ages (Zahn-Waxler et al., 2000). For example, animal phobias are more likely in early childhood compared to social-related phobias, which are more common in adolescence (Zahn-Waxler et al., 2000). Separation anxiety disorder appears most frequently during early and middle childhood, while generalized anxiety disorder appears most frequently in older children and adolescents. The emergence of panic disorder, rare during childhood, seems to be associated with puberty, appearing more frequently during adolescence. Obsessive-compulsive disorder-onset occurs during early and middle childhood (Zahn-Waxler et al., 2000).

Prevalence of major depression, in contrast, is fairly low in childhood (between 2-8 %) (Zahn-Waxler et al., 2000). In late adolescence, it increases to 15-20% for major depression, and from 2 % to 9 % for dysthymic disorder (Zahn-Waxler et al., 2000). The average rate of all depressive disorders (including major depression) is 6.1 % for adolescents between ages 12 and 19, with a range between 3.1 and 7.2 % (Costello, Copeland, & Angold, 2011). With regards to emotional problems in Norwegian preadolescents, Heiervang, Goodman, and Goodman (2008), found that about 3 % of 8-10- year olds from a representative population-based survey in the city of Bergen were diagnosed as having an emotional disorder. Among Norwegian studies on emotional problems in preadolescence based on the SDQ, one study from Norway found that 12 % of preadolescents had emotional problem scores that designated them as a high risk group for emotional problems (i.e., total emotional problem scores from 6 to 10) (Van Roy, Groholt, Heyerdahl, & Clench-Aas, 2006). Similarly, about 5 % of a sample of 12,000 Norwegian adolescents described themselves as “quite distressed or troubled” in terms of depressive symptoms (Wichstrom, 1999). Importantly, it was also found that 16 % of those with emotional disorders had comorbid disorders, such as behavioral disorders, hyperactivity or autism (Heiervang et al., 2008b). This means that emotional problems in preadolescents are sometimes accompanied by behavioral problems as well. A new mood disorder “disruptive mood dysregulation disorder”, which was introduced in the 5th edition of the Diagnostic and Statistical Manual of Mental Disorders, exemplifies this point (American Psychiatric Association, 2013).

1.1.5. Predictors

Emotional problems are likely to be the results of the interplay between multiple risk factors both in the individual, as well as in the proximal and more distal context of the individual (Cicchetti & Rogosch, 2002). In this thesis, the articles have included a number of risk factors found in the research literature to be of relevance for preadolescents and in particular those with immigrant background. These include socioeconomic status (SES) (Conger, Jewsbury Conger, Matthews, & Elder, 1999), gender (Lewinsohn, Hops, Roberts, Seeley, & Andrews, 1993; Nolen-Hoeksema & Girgus, 1994; Zahn-Waxler et al., 2000), ethnic background (Abebe, Lien, & Hjelde, 2012; Dalgard & Thapa, 2007), age (Zahn-Waxler et al., 2000), urban setting (Bijl, Ravelli, & Van Zessen, 1998; Fandrem, Sam, & Roland, 2009), family factors (Field, 2010; Oppedal & Roysamb, 2004), and school factors (Field, 2010; Kistner, David-Ferdon, Lopez, & Dunkel, 2007; Oppedal & Roysamb, 2004). These

factors are presented as part of an adapted version of Urie Bronfenbrenner's (1979) Bioecological model (see page 15), after the section on emotional problems among immigrant preadolescents has been presented.

1.1.6. Preadolescence as an Important Developmental Phase to Study Emotional Problems

It is important to understand more about emotional problems in preadolescence because it is the phase before puberty and adolescence, during which emotional problems increase (Nolen-Hoeksema & Girgus, 1994). Relative to adolescence, there is less knowledge about emotional problems in this phase, possibly due to the relatively lower prevalence of emotional problems in preadolescence (Zahn-Waxler et al., 2000). Nevertheless, understanding more about problems in *preadolescence* can also increase understanding as to why emotional problems are more prevalent in adolescence: What is it about this phase prior to puberty that seems protective in terms of emotional problems? Some of the proposed suggestions implicate: Lower levels of implicated hormones, less demands of personal responsibility at home and in school (Nolen-Hoeksema & Girgus, 1994), less demanding social roles (Kistner et al., 2007), as well as lower academic pressure (Luthar & Becker, 2002).

Probably because emotional problems are far more prevalent in adolescence, emotional problems during *preadolescence* have been less studied. Another reason to study emotional problems in preadolescence is that high levels of emotional problems in this developmental phase may be linked to more severe and chronic types of emotional disturbances (Lieb et al., 2002). However, it should be noted that, compared to adolescence, it is more difficult to distinguish between distinct emotional problems, such as depressive and anxious symptoms (Brady & Kendall, 1992) & Van Roy, 2008), and between emotional and behavioral problems (Association, 2000). Although emotional problems in preadolescence are less common than in adolescents, when these problems do occur they should be taken seriously.

Compared to behavioral problems, emotional problems are less visible and disruptive to others. It may therefore take longer for the home or school environment to detect and help these preadolescents. One study from Norway found that only about 13 % of preadolescents who suffered from emotional problems reported receiving treatment (Heiervang et al., 2007). Failure to detect emotional problems early can therefore both prolong unnecessary suffering, and have serious concurrent consequences; they can, for instance, hamper academic success (McLeod & Kaiser, 2004), and the integration of immigrant preadolescents (Sam & Berry, 1995).

1.2. Emotional Problems in Immigrant Preadolescents

1.2.1. Immigrant Definition and Related Terms

Immigrants are defined as individuals who are foreign-born and have immigrated to Norway, or who have two foreign-born parents (Norway, 2011). Immigrants have been divided into *first-generation immigrants*, who are adults at the time of migration, and *1.5-generation*, who are children or adolescents at the time of immigration (Hao & Woo, 2012). This distinction has appeared due to specific advantages and challenges immigrant children face, as compared to their parents. Advantages are that immigrant children more easily learn the new language and culture, compared to their parents, and therefore may act as “cultural bridges”, or translators between parental immigrant culture/language and new culture/language (Orellana, Dorner, & Pulido, 2003). Challenges are that some immigrant children may feel that they do not belong in either culture, struggle with their ethnic identity, and experience the role as “cultural bridge” as a precociously heavy responsibility (Orellana et al., 2003). The term *second-generation immigrant* has been used to describe children of immigrants who are born in the new country.

In the case of second-generation immigrants, there has been additional concern about the political consequences of categorizing Norwegian-born children as immigrants: When does a person stop being an immigrant and becomes a native? What effect does calling Norwegian-born as “immigrants” have on their identity and integration? There is concern by Norwegian scholars that immigrant categorization could marginalize a generation of Norwegian-born children (Norway, 2011). Instead, they suggest broadening the definition of “Norwegian”, and avoiding the term “second-generation immigrant”. Statistics Norway, in conjunction with scholars who are concerned about marginalizing these children’s Norwegian identity, and its consequences for integration in Norway, has recommended that these children should be called “Norwegian-born with immigrant parents” (Norway, 2011). In this thesis, we have opted for the shorter label “*immigrant background*” or “immigrant”, which includes both Norwegian-born and foreign-born children of immigrants (i.e., first, 1.5, and second immigrant generations), with at least three grandparents born abroad.

Statistics Norway has divided immigrants into two main groups, which roughly overlap with the old categories non-Western and Western. These terms are not used by Statistics Norway due to critics claiming it supports an old view of the world, and currently Europe is no longer divided by the iron curtain. Statistics Norway’s categories are:

1. European Economic Area (EEA), USA, Canada, Australia, and New Zealand.
2. Africa, Asia, Oceania except Australia and New Zealand, and European countries outside

of the EEA (Norway, 2011).

In this thesis, immigrant background from category 2 will be described as *non-Western*, while background from category 1 will be described as *Western*. Although old-fashioned, these terms are applied due to lack of new terms which combine accuracy and simplicity (i.e., are easy to communicate). But, what do immigrants in category 1 (Western immigrants) have in common? They share a background from high income-countries with high levels of education, and traditionally immigrate to Norway for different reasons than those in category 2 (non-Western), such as highly-skilled labor (Fernández-Kelly & Portes, 2008). When comparing Western to non-Western immigrants, a larger proportion of individuals have a physical appearance that resembles that of ethnic Norwegians in the first group. In contrast, most non-Western immigrants in Norway do not have a European phenotype, and are physically different from the ethnic majority. Many of them, but not all, can be said to be “physically salient”, which means that their physical appearance such as skin color or dressing code “stands out” from the norm (Fiske, 2002). Physical salience can have consequences for social and economically integration, as well as discrimination (in the work marked for parents, or in the school system for preadolescents) (Fandrem, Sam, et al., 2009; Sellers & Shelton, 2003; Steele, 2003; Stevens, Vollebergh, Pels, & Crijnen, 2005). In addition, non-Western immigrants generally share a background from low- and middle-income countries, with generally different reasons for migration (most refugees being non-Western), a lower socio-economic background, and a lower employment participation, although these are general tendencies (Bratt, 2005; Seglem, Oppedal, & Raeder, 2011; Vollebergh et al., 2005).

Besides the terms “immigrant background” and “immigrant”, “*ethnic minority*” is used. Ethnic minority is a broader term which encompasses “immigrant background”, but also includes indigenous minorities, sojourners, and adopted children with a distinct phenotype from the one that prevails in the specific majority society. In Norway’s case, a non-European physical appearance would designate as an ethnic minority-background. Thus, all those with immigrant background are ethnic minorities, but not all ethnic minorities have immigrant background. This is shown graphically in Figure 1, which illustrates the hierarchy of immigrant terms from broad to narrow.

Ethnic majority (or, in Norway, *ethnic Norwegian*) preadolescents are defined in this thesis as individuals with two Norwegian-born parents, and at least three grandparents born in Norway.

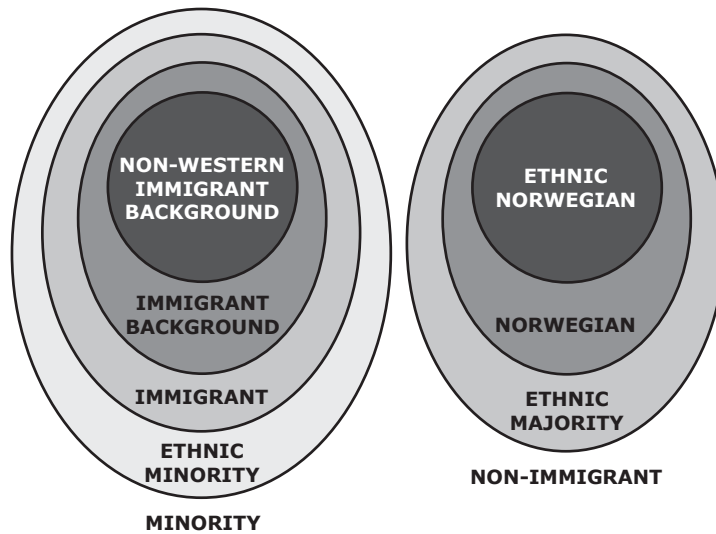


Figure 1. Hierarchy of immigration terms.

“Ethnic status” is used to divide the preadolescents into three groups: (I) ethnic Norwegians/majority in Norway, (II) immigrants/ethnic minorities, and (III) those with “dual ethnic status” with one immigrant parent, and one ethnic Norwegian parent. As regards ethnic status, it is used in this thesis as the dichotomy: (I) ethnic Norwegian (i.e., majority) versus (II) immigrant (minority). Those with dual ethnic status are not part of this study, since their dual ethnic background may require especial attention (Shih & Sanchez, 2005). Finally, *culture* is defined as a set of communication patterns, affective styles, familial roles, as well as values regarding personal control, collectivism, individualism and religiousness, among other features (Triandis et.al, 1980).

1.2.2. The Demographic Context of Immigrants in Norway

Immigrants and their Norwegian-born children (12% and 2%, respectively) comprise 14 % of the current population of Norway. Of these, 57 % have a non-Western background (Statistics Norway, 2011). Norway is one of the wealthiest countries in the world, in addition to being one of the most socially egalitarian (UN, 2011). The generous Norwegian social welfare system has provided citizens with a safety net against extreme social disadvantage, and a minimum budget to cover life’s basic needs such as food, housing, education and health (Blekesaune & Quadagno, 2003). Norway is one of the few countries in the world where additional higher education pays the least, making it an especially attractive destination for

labor immigrants with low education (Martins & Pereira, 2004).

Today, the largest immigrant groups come from Poland, Sweden, Lithuania, Germany and Somalia (Statistics Norway, 2013). The largest second-generation groups are Pakistani, Somali and Vietnamese (Statistics Norway, 2013). Reasons for immigration are diverse. Among non-Nordic immigrants, about 50 % arrived as labor immigrants, 30 % came to be reunited with family members (family reunion), 10 % as refugees or asylum-seekers, and the final 10 % as students (Statistics Norway, 2013).

Western-background immigrants have increased substantially during the last decade, largely due to the extensions of the European Union (EU) during 2004 and 2007 (*Meld. St. 6 (2012-2013)*, 2013). Norway is part of the European Economic Area, and EU citizens have the right to move freely to and seek work in Norway. Another reason for the increase in European immigrant groups during the last years is the economic crisis that has hit Europe, and by which Norway has been relatively unaffected (*Meld. St. 6 (2012-2013)*, 2013). From the beginning of 2006 to 2007, Polish immigrants increased so substantially that, as a group, they went from being the 6th largest immigrant group to being the single largest (Statistics Norway, 2013). The largest immigrant groups in 2007 were from Poland, Pakistan, Sweden, Iraq, and Somalia, with three non-Western countries on the list; comparatively, Somali immigrants are the only current non-Western group. Additionally, the largest groups of second-generation in 2007 were from Pakistan, Vietnam, Somalia, Turkey and Sri Lanka (Ministry of Foreign Affairs, 2008). Immigrants from Pakistan, Turkey and Sri Lanka, are particularly relevant for this thesis, and will be presented in the next section.

1.2.3. Immigrants from Pakistan, Turkey and Sri Lanka

1.2.3.1. Pakistan

In 2004, a relevant year for this study as presented in the Methods section, the population with Pakistani background in Norway comprised about 37000, and was younger than that of ethnic Norwegians, with 75 % being younger than 18 years old (Lie, 2004). Today, those with Pakistani background comprise the largest group (15 000) of second-generation immigrants (i.e. Norwegian-born with immigrant parents) in the country. The first Pakistanis were labor immigrants who arrived in Norway in the late 1960s, most from one district in Pakistan called Gujarat (Syed et al., 2006). Since the enforcement of the ban on labor immigration introduced by a new legislation in 1975, the main reason for Pakistani immigration has been family reunion (Syed et al., 2006). Some typical demographic patterns

for Pakistanis are large households, as well as settlement in and around Oslo. Sixty per cent of Pakistani households include more than five persons, compared to 18 % for the general population (Lie, 2004). On average, first-generation Pakistanis in Norway have low education level, while the opposite holds for second-generation Pakistanis: They have higher education level than other Norwegian-born children of immigrants (Lie, 2004).

Second-generation Pakistanis have reported difficulties in balancing the Norwegian and Pakistani ethnic identities (Eriksen, 2001). They are born in Norway, speak Norwegian without an accent, are far more familiar with Norwegian society than their parents (Eriksen, 2001). At the same time, many practice their parents' religion and customs. They are Moslems, speaking Urdu or a similar language at home, and they expect the same treatment as Norwegians by society (Eriksen, 2001). This life of balancing the majority and minority cultures, and coping with their minority identity as seen by the majority society, may leave second-generation Pakistanis with an unstable sense of identity (Eriksen, 2001). On the one hand, second generation Pakistanis have grown up hearing from Norwegians that they are different, while on the other hand they know no other homeland than Norway (Eriksen, 2001). In addition, second-generation Pakistanis have grown up with pressure from their parents to follow traditional values, and to refrain from becoming "too Norwegian" (Eriksen, 2001). In contrast to those from the second-generation, first-generation Pakistanis are not as well-integrated (in terms of level of education and labor market participation) in Norwegian society when taking into consideration that they are the immigrant group that has been in Norway for the longest period of time (Østby, 2013).

1.2.3.2. Turkey

Like Pakistanis, immigrants with background from Turkey generally constitute a younger population than the Norwegian population and have been in Norway for a long period of time (Østby, 2013). Most of first generation immigrants from Turkey came to Norway as work migrants before the ban on labor immigration in 1975. Subsequently, they have primarily arrived in Norway through Family Reunion programs (Østby, 2013). After 1980, most of the refugees from Turkey were of Kurdish ethnic minority. The largest Turkish population lives in Oslo, while Bergen is home to the 5th largest Turkish immigrant population and their children (Statistics Norway, 2010).

In general, Turkish immigrants have low levels of education and income. In one study comparing large immigrant groups in Norway, Turkish couples had the lowest household

income among immigrant couples in Norway (Lie, 2004). This is the case for immigrants and their Norwegian-born children, although there is a substantial gender difference in these children's educational levels: about 18 % of girls participate in higher education, compared to only 4 % of boys. There has also been an overrepresentation of women compared to men in higher education among first-generation Turkish immigrants (Lie, 2004). In contrast, Turkish men (51%) have been overrepresented in the labor market as compared to Turkish women (34%) (Lie, 2004).

1.2.3.3. Sri Lanka

In 2004, immigrants from Sri Lanka were the 10th largest immigrant group in Norway. Children of immigrants from Sri Lanka were, however, the 4th largest group among Norwegian-born children of immigrants (Lie, 2004). Most immigrants from Sri Lanka came to Norway as refugees (Guribye, Sandal, & Oppedal, 2011), fleeing their homes after the civil war in Sri Lanka began in the 1980s due to conflicts between the government and the Tamil separatist organization (Liberation Tigers of Tamil Eelam) (Guribye et al., 2011). Of all Sri Lankan immigrants in Norway, about 47 % live in the capital and 17 % live in Bergen, and the large majority of them are of Tamil ethnic and language background (Guribye et al., 2011).

In terms of education, immigrants from Sri Lanka have a medium-high education level, with most reporting high school as their highest level of education (Lie, 2004). In terms of participation in the Norwegian labor force, however, immigrants from Sri Lanka have a high representation. Tamil immigrants in Norway are considered a model immigrant minority (Engebrigtsen & Fuglerud, 2009; Guribye et al., 2011), an opinion that rests on several facts. The mean income of couples from Sri Lanka is higher than average for immigrants in general, and they have fewer children than other immigrants from non-Western countries (Engebrigtsen & Fuglerud, 2009). Perhaps it should not be a shock, then, to note that their children are also among the most successful in higher education institutions (Guribye et al., 2011).

1.3. Theoretical and Empirical Perspectives

1.3.1. The Bioecological Model

Urie Bronfenbrenner's (1979) bioecological model is one of the most encompassing models of the general context of development (Siegler, DeLoache, & Eisenberg, 2006). According to Bronfenbrenner (1979), the environment is a «set of nested structures, each inside the next, like a set of Russian dolls» (p. 22). Each structure is referred to as a «system», which emphasizes the complexity and interconnectedness of each structure, and represents a different level of influence on development (Siegler et al., 2006).

In this thesis, the bioecological model is adapted and further developed to illustrate the interplay of particular risk and protective factors among preadolescents with immigrant background. Figure 2 describes the adaptation of the bioecological model to the preadolescent immigrant context, in which the preadolescent is found at the center of all systems, and both influences and is influenced by all of them.

The *microsystem* represents the closest level in which the preadolescent is embedded, and includes all people with whom the preadolescent has direct contact. In others words, the microsystem includes roles, relationships, and activities in the family, school, neighborhood, organized sports, clubs, as well as cultural and religious groups (Bronfenbrenner, 1979). Importantly, the preadolescent also influences the microsystem with unique characteristics such as genes, gender, phenotype, physical appearance, temperament, cognitive skills, and social skills. Temperament traits such as shyness and negative emotionality have, for instance, been proposed as risk factors for emotional problems (Leve, Kim, & Pears, 2005; Mathiesen & Sanson, 2000). Ethnic status (minority versus majority background), including immigrant background, is placed at the individual level, at the center of the model. This is because minority background can in some (but not all) cases be identified by individual attributes such as physical appearance, and ethnic or religious symbols. Moreover, groups of different ethnic/minority/immigrant backgrounds vary in the kinds of behaviors they value and condone, as well as in cultural norms regarding displays and regulation of emotion, self-expression, and the role of the self in relation to others. These variations, as well as different culturally-defined ways of coping with distress, may also help to understand how the expression of emotional problems differs in different contexts, and developmental phases (American Psychiatric Association, 2013). Emotional problems, for example, have been reported more often in some countries such as Greece, Thailand and Puerto Rico, as compared to others such as the United States, Germany and Sweden (Crijnen, Achenbach, & Verhulst, 1999).

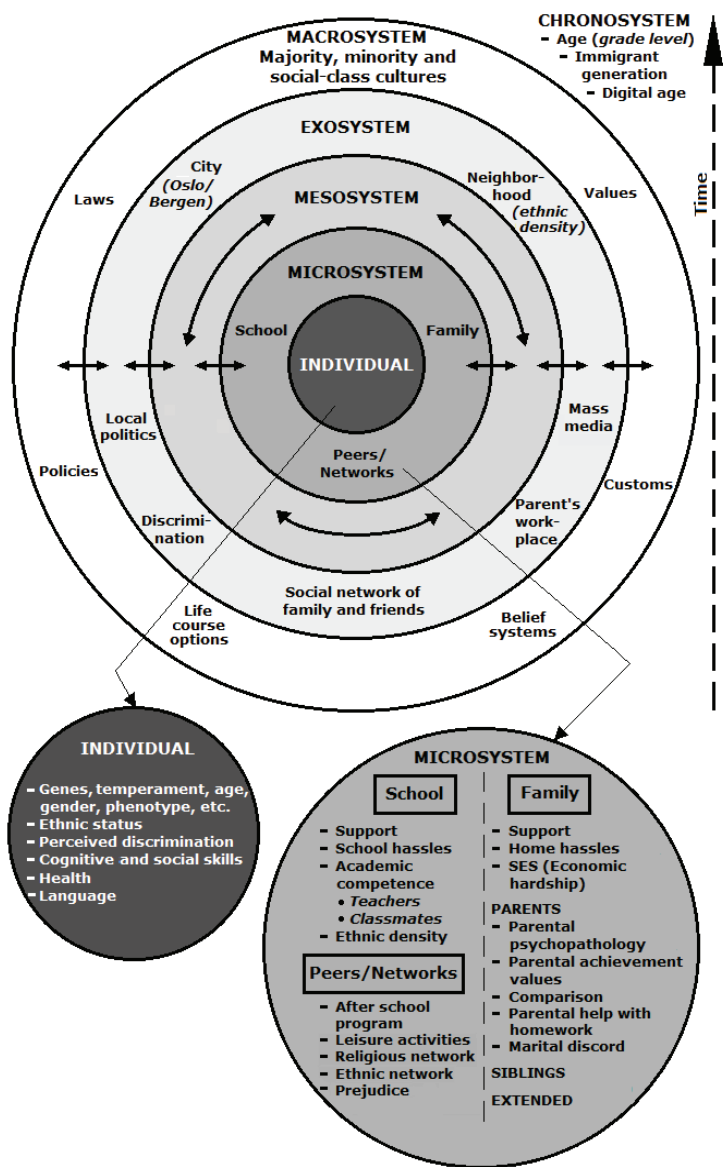


Figure 2. Bioecological model of subsystems that preadolescents with and without immigrant background are embedded in (developed from Bronfenbrenner, 1979).

The mutual influence of the preadolescent and the microsystems can be illustrated by interpersonal factors such as social skills. Good social skills refer to being able to interact with other people in ways that are both appropriate (by not eliciting negative reactions from others) and effective (by achieving one's goal with the interaction), and are associated with

low adolescent depressive symptoms (Negri, Hillman, & Dorn, 2011). Social support can also assist in managing stressors and challenges during adolescent developmental transitions (Colarossi & Eccles, 2003).

With regard to family factors, it is well documented that parental psychopathology is associated with the development of emotional problems in children (Field, 2010; Sanders, 1999). More specifically, maternal depression is associated with less sensitivity and responsiveness towards children (Field, 2010). Children exposed to maternal distress at ages 9 to 11 experienced subsequent increases in child internalizing problems from ages 11 to 13 (Jaffee & Poulton, 2006). Although presented as a factor in the microsystem, maternal depression can also influence preadolescent emotional problems through genetics (Sullivan, Neale, & Kendler, 2000), which would place it as a risk factor in the model's individual level. In addition to parental psychopathology, one study found that both parental supervision, as well as harsh, rigid and inconsistent discipline were associated with emotional problems among children (Sanders, 1999). In contrast, warm positive relationship with parents and family stability were related to less emotional problems (Ivanova & Israel, 2006; Sanders, 1999).

With regard to school factors, school is a pivotal part of the microsystem and important for the socialization of preadolescents. Poor academic competence (Lazaratou, Dikeos, Anagnostopoulos, & Soldatos, 2010), and high levels of school hassles (Kistner et al., 2007; Oppedal & Roysamb, 2004) are examples of school factors that have been associated with emotional problems. For those with immigrant background the home is the main domain for enculturation (i.e., acquiring of own cultural skills and norms), whereas the school is the main domain for acculturation (i.e., changes resulting from contact with other cultural groups, in this case primarily majority culture) (Vedder & Horenczyk, 2011). Non-immigrant preadolescents can be said to have an advantage over immigrant children, in the sense that there is a higher overlap between the language, rules and codes that they learn in their home environment and those that they learn in the school system. In other words, the acculturation and enculturation of non-immigrant preadolescents is expected to overlap more than that of immigrant preadolescents, which could give non-immigrants a head start.

Although not central to this thesis, peers are a central part of the microsystem, along with family and school. Problematic peer relationships, such as peer victimization and discrimination have also been associated with emotional problems (Fandrem, Strohmeier, & Roland, 2009; Hoglund & Chisholm, 2013). The influence and connections among different microsystems, such as peers, family, and school is referred to as the *mesosystem* in the

bioecological model (Bronfenbrenner, 1979). Positive outcomes for the preadolescent are more likely to occur if different microsystems within the mesosystem are supportive. For instance, the preadolescent is more likely to obtain good academic results if the home, school and peer environments value academic success (Luster & McAddoo, 1996).

The *exosystem* refers to interactions between settings that the preadolescents do not directly interact with, but still influence their development indirectly. Examples of exosystems are urban setting (Bijl et al., 1998; Fandrem, Sam, et al., 2009), neighborhood (Wight, Aneshensel, Botticello, & Sepulveda, 2005), and parental workplace (Siegler et al., 2006). When it comes to the study of urban versus rural influences on emotional problems, findings are mixed (Carragher, Adamson, Bunting, & McCann, 2009; Fandrem, Sam, et al., 2009). Parental workplace can affect preadolescents' development indirectly through the atmosphere that parents work under, and policies about flexible working hours. These conditions may influence parents' ability to interact with the preadolescent when they arrive home from work (Siegler et al., 2006).

The *macrosystem* is the outer level of Bronfenbrenner's model (Bronfenbrenner, 1986). It refers, for instance, to the cultures (i.e., social class, minority and majority) in which the preadolescents are exposed to through general beliefs, customs, values, and laws. These are embedded in all the other levels. In addition to the layered levels in the model, there is also a temporal dimension, called the *chronosystem* (Bronfenbrenner, 1986). This system refers to three different aspects: the age of the preadolescent at the time of a particular life event or stressor; the increasingly active role that preadolescents take in their own development as they grow older; and change over time of society's beliefs, values, customs and technologies (Siegler et al., 2006). Changes in society over time lead different developmental environments for different generations.

1.3.2. Individual Factors: Ethnic Background and Gender

1.3.2.1. Ethnic Background and Emotional Problems

Reviews comparing immigrant and non-immigrant levels of emotional problems in children and adolescents have yielded mixed findings (Abebe et al., 2012; Belhadj Kouider, Koglin, & Petermann, 2013; Stevens & Vollebergh, 2008). Diverging findings have been related to variations of ethnic minority groups (Bengi-Arslan, Verhulst, van der Ende, & Erol, 1997; Lorenzo, Frost, & Reinherz, 2000); non-immigrant reference groups (Alati, Najman, Shuttlewood, Williams, & Bor, 2003; Oppedal & Roysamb, 2004), countries of immigrant

settlement (Janssen et al., 2004; Sam & Virta, 2003), measures (Willgerodt & Thompson, 2006), and informant sources (Stevens et al., 2003).

The focus of this thesis is on self-reports by children/(pre)adolescents, as well as comparative studies between immigrants and non-immigrants in the same country. With these as the inclusion criteria, international studies tend to find either equal or higher levels of emotional problems among immigrant, as compared to non-immigrant preadolescents and adolescents (Abebe et al., 2012; Belhadj Kouider et al., 2013; Hao & Woo, 2012; Stevens & Vollebergh, 2008). In Norway, most comparative studies of self-reported emotional problems among preadolescents and adolescents indicate that immigrants report higher levels of emotional problems than non-immigrant peers (Abebe et al., 2012; Alves, Roysamb, Oppedal, & Zachrisson, 2011). The number of Norwegian studies that find equal levels of emotional problems among immigrants and non-immigrants is about half of that which finds higher levels among immigrants (Abebe et al., 2012). Only a few studies report either only lower or both lower and higher levels of emotional problems among immigrant (pre)adolescents, as compared to non-immigrant peers in and outside of Norway (Derluyn, Broekaert, & Schuyten, 2008; Sam & Virta, 2003; Vaage et al., 2009; Zwirs et al., 2007). In light of the presented literature, immigrant preadolescents in Norway can be expected to report higher levels of emotional problems, followed by equal levels, as compared to non-immigrants.

1.3.2.2. The Immigrant Effect on Emotional Problems: Healthy or Unhealthy?

The hypothesized reasons for higher rates of emotional problems in immigrant groups can roughly be divided into three categories (Stevens & Vollebergh, 2008): migration-induced stress, minority position, and specific cultural background. *Migration-induced stress*, refers to difficulties adapting to the new society due to differences between family and societal values, interpersonal communication, and social roles. Also, asymmetric acculturation, is thought to contribute to migration-induced stress. Asymmetric acculturation refers to children's relatively quicker and more thorough acquisition of the new culture and language than their immigrant parents. *Minority position*, refers to the frequent perception of immigrants as occupying the bottom of the social hierarchy in the society of settlement. This may be due to lack of economic, social or cultural capital in the new society, lower socio-economic status, social exclusion, discrimination (intended and unintended), and restricted policies (Coll, Lamberty, et al., 1996).

With respect to *specific cultural background* two major models have been proposed to

link cultural characteristics to child mental health: problem-suppression and adult distress-threshold models (Mohler, 2001). The problem-suppression model suggests that culture has a direct effect on emotional problems, since preadolescents tend to internalize, adopt and behave according to cultural norms of acceptable behavior. In contrast, the adult distress-threshold model suggests that culture has an indirect effect on child emotional problems. This indirect effect takes place when parents suppress undesirable behavior (through punishment or social pressure) or facilitate desirable behavior (through modelling, reward or teaching) (Weisz, McCarty, Eastman, Chaayasit, & et al., 1997).

The above models seek to explain why immigrants supposedly have more emotional problems than non-immigrants. In contrast, the term “healthy immigrant paradox” has been used to describe findings in which immigrants supposedly show better mental health, such as less emotional problems, than non-immigrants (Jackson, Kiernan, & McLanahan, 2012; Sam, Vedder, Liebkind, Neto, & Virta, 2008). These theories are linked to studies that find immigrant youth fare better in psychological well-being than native-born youth, but with considerable within-group heterogeneity (Hao and Woo 2011).

Although the healthy immigrant paradox has been defined differently across studies (Sam et al., 2008), one definition refers to favorable physical and mental health outcomes among children of immigrants regardless of their socioeconomic status (Jackson et al., 2012). Applying this definition, equal levels of emotional problems among immigrants and non-immigrants could be defined as a healthy immigrant effect. This is because immigrants, in general, could be expected to have lower levels of mental health given their likelihood for social disadvantage (Jackson et al., 2012).

The costs of migration and the uncertainty of future adaptation in the host society are circumstances that may lead to the selection of adult immigrants with certain unobserved traits such as ambition, motivation and a desire for better life chances for their offspring (Hao & Woo, 2012). This, combined with having surpassed challenges during the migration process, may result in the selection of the fittest, healthiest people (Bhugra, 2004). There is also a theory suggesting that immigrant families often have a strong and supportive family culture, which protects immigrants from the development of emotional problems (Harker, 2001). Finally, children of immigrants may have an advantage derived from having, at least, one extra set of language and culture (Vedder & Horenczyk, 2011). Additional languages and cultures may facilitate the perception of different perspectives, which may enable children of immigrants a higher level of flexibility and adaptation to new situations.

This body of research has produced important findings, although those for physical

health are more compelling than for mental health (Jackson et al., 2012). Also, the majority of these findings stem from North-America (particularly the United States), where a large proportion of immigrants are actively selected in terms of their ability to contribute to the country of settlement, or arrive illegally (Sam et al., 2008). This selection of immigrants may partly explain why the immigrant paradox has not been as thoroughly replicated in other parts of the world, such as Europe (Sam et al., 2008).

1.3.2.3. Gender Differences in Emotional Problems across Ethnic Status

Gender is placed at the individual level of Bronfenbrenner's model in Figure 2. However, gender may influence different levels of a child's environment, starting in the microsystem, where gender roles are elicited in the interaction between peers, teachers, and family members. In the mesosystem, the position and responsibilities of girls in the family may differ quite substantially from that in the school (Pels & Haan, 2003). In the exosystem, the mass media may reinforce or challenge stereotypes about girls and boys, immigrants or not (Gigi Durham, 2004). In the macrosystem, implicit cultural differences concerning how girls and boys should behave and express emotional distress can be found (Branney & White, 2008).

During childhood, gender differences in emotional problems are less pronounced (Zahn-Waxler, Crick, Shirliff, & Woods, 2006) but girls tend to exhibit far fewer externalizing problems than boys (Zahn-Waxler et al., 2000). By adolescence, a gender gap in emotional problems (also referred to as "the gender gap") emerges, in which girls show a marked increase in anxiety and mood disorders and symptoms (Nolen-Hoeksema & Girgus, 1994). In adolescence, female gender becomes the most critical marker for emotional problems, and girls are twice as likely to become anxious (Zahn-Waxler et al., 2000), and depressed (Lewinsohn et al., 1993; Nolen-Hoeksema & Girgus, 1994; Siegel, Aneshensel, Taub, Cantwell, & Driscoll, 1998). This pattern continues throughout the course of life (Nolen-Hoeksema & Girgus, 1994; Zahn-Waxler et al., 2006), although there are exceptions (Sun, Tao, Hao, & Wan, 2010). Comorbidity of anxiety and depression is more common in girls than boys, and the pattern of having more than one anxiety disorder during childhood is virtually exclusive to girls (Zahn-Waxler et al., 2000). Thus, gender plays a role in emotional problems both as an independent predictor and as a moderator of other variables (Zahn-Waxler et al., 2006).

As compared to adolescence, findings in preadolescence are more mixed. Among studies investigating only ethnic majority preadolescents, three diverging results emerged according to different researchers: (1) no gender difference in emotional problems before

puberty or until age 13 (Angold, Costello, Erkanli, & Worthman, 1999; Hankin et al., 1998; Sun et al., 2010), (2) boys had more emotional problems than girls (Anderson, Williams, McGee, & Silva, 1987; Nolen-Hoeksema, Girgus, & Seligman, 1992), and (3) girls had more emotional problems than boys (Van Roy et al., 2006). Although some of the mixed results may be due to different measures of emotional problems and/or different levels of pubertal maturity in samples across studies, they do indicate a need for more studies investigating emotional problems in preadolescents.

1.3.2.4. The Gender Gap across Ethnic Status

Although the gender gap is assumed to be a cross-cultural phenomenon, the studies that support this finding do not investigate ethnic minorities but (predominantly) ethnic majority adolescents in different countries (Crijnen et al., 1999; Zahn-Waxler et al., 2000). There is limited knowledge about the validity of the gender gap among ethnic minority or immigrant populations. One study indirectly questions the gender gap by comparing depressive symptoms across gender and ethnic background (Kistner et al., 2007). Otherwise, most studies that include both ethnic majority and minority groups while also assessing the effects of gender on emotional problems do not focus on gender differences across ethnic groups but on ethnic differences across gender (Cole, Martin, Peeke, Henderson, & Harwell, 1998; Fandrem, Sam, et al., 2009; Oppedal & Roysamb, 2004; Romero-Acosta, Penelo, Noorian, Ferreira, & Domènech-Llaberia, 2013; Sagatun, Lien, Sogaard, Bjertness, & Heyerdahl, 2008; Virta, Sam, & Westin, 2004). These studies tend to find that a larger gender gap (i.e., higher levels of emotional problems in girls as compared to boys) among adolescents of ethnic majority background; although there are exceptions (Sagatun et al., 2008; Vaage et al., 2009). Studies that only include older minority adolescents (aged 15 and older) suggest that the gender gap may emerge later in ethnic minority adolescents (Oppedal, 2008; Oppedal et al., 2005). In these older minority samples, the gender gap is replicated with girls reporting higher scores of emotional problems than boys.

The scarce literature on this topic provides limited theoretical accounts as to why the gender gap in emotional problems does not seem to be found as readily in minorities during preadolescence as it is in majority adolescents. However, studies that investigated emotional problems across gender and ethnic background before age 15 found that minority boys show higher levels of emotional problems than majority boys (Kistner et al., 2007; Oppedal et al., 2005). This finding is partly explained by the lack of gender differences in minorities.

Following this line of thought, high emotional problem scores in girls (minority or not) are expected, while similar scores in boys are unexpected. Moreover, when minority boys' emotional problems are unexpectedly high, the gender gap in the minority group is diminished and sometimes nonexistent. There may be particular social circumstances that inflate minority boys' emotional problems in preadolescence which could help explain the supposed later emergence of the gender gap in minorities.

Hypothesized risk factors involved may be related to higher exposure to discrimination among immigrant boys, as compared to immigrant girls (Coll, Crnic, Lamberty, & Wasik, 1996), factors related to masculine gender roles in different ethnic groups (Branney & White, 2008), as well as stronger pressure from the family to succeed academically (Kistner et al., 2007; Mesman, Bongers, & Koot, 2001; Mesman & Koot, 2000). Preadolescent minority boys may not experience some of the social circumstances associated with their protective (in terms of emotional problems) masculine gender. Alternatively, minorities may experience hassles that exacerbate emotional problems, and minority boys may be particularly sensitive to some of these hassles. Thus, minorities' levels of emotional problems would be higher than for majority peers, and the differences between minority girls' and boys' levels of emotional problems (i.e., the gender gap) would be smaller. In other words, we could look for clues concerning the gender gap by investigating the "ethnic gap" across gender.

1.3.3. The Interaction of the School and Family Microsystems

As already noted, mutually supportive school and family microsystems contribute to preadolescent achieving desired goals. The preadolescent's family system can be supportive or unsupportive towards school environment. Parental help with homework, which has been associated with positive academic outcomes (Hoover-Dempsey et al., 2001) can be viewed as a supportive factor, although negative associations have also been found (Hill & Tyson, 2009). In contrast, domestic chore-burden can be viewed as an unsupportive factor, although some studies have not found an association between domestic chore-burden and low academic achievement (Frøyland & Gjerustad, 2012; Orellana, 2003). It has been suggested that domestic chore-burden may partly explain why some groups of immigrant preadolescents, especially girls, appear to engage less than ethnic majority peers in leisure activities that seem to protect them from emotional problems (Aalandslid, 2009). Parental achievement values and comparison are factors that lie in the intersection between the school and family microsystems. In the following section, findings regarding the relationship between parental achievement values, comparison

and emotional problems across ethnic background are presented.

1.3.3.1. Parental Achievement Values and Comparison

For many immigrant parents, the importance assigned to academic achievement is particularly high (Horenczyk G, 2001). Upward social mobility is a powerful factor driving immigrants to settle in new countries, especially those moving from developing to industrialized countries. Immigrant parents tend to perceive education as a primary avenue through which social mobility can be achieved by their children in the new country (Gibson & Ogbu, 1991). It has been proposed that immigrant parents in the US are optimistic about their offspring's educational and socioeconomic prospects (Hao & Woo, 2012; Kao & Tienda, 1995). This may prompt their children to try harder to achieve academically. It is unclear, though, how immigrant parents' optimism leads their children to adopt behaviors that influence their emotional health. Given that social mobility is usually an integral motivation in immigrants, higher levels of parental achievement values (that is, attitudes that emphasize academic achievement) are expected among immigrant parents, as compared to non-immigrant parents. Several studies have supported this finding (Fuligni, 1997; Hao & Woo, 2012; Pong & Landale, 2012), particularly among Asian immigrant groups in the US, giving rise to the "Asian model minority- stereotype" (Chen & Stevenson, 1995; Lee, 2012). This stereotype permeates American society and refers to the tendency to regard Asian immigrants as high achieving students and employees (hence, as a "model" minority).

Although parental achievement values have been linked to positive outcomes in adolescents (Fuligni & Zhang, 2004; Jeynes, 2007; Sheldon & Epstein, 2005), they have also been linked to emotional problems in groups such as the Chinese (Huang, Xia, Sun, Zhang, & Wu, 2009), and the Korean (Kim, 1997), as well as affluent suburban adolescents in the US (Luthar & Becker, 2002). The latter suggests that the link between strong parental achievement values and emotional problems may not necessarily be limited to immigrant groups. Even though such research has been in demand (Kasser & Ryan, 1993, 1996; Luthar & Becker, 2002), not much is known about the relationship between parental achievement values and emotional problems in adolescents, particularly immigrant adolescents. But why might strong parental achievement values be related to emotional problems? Strong feelings of pressure to achieve in accordance to parental (or the child's own) values may be part of the explanation.

This is because achievement *pressure*, either parental, or personal, appears to increase emotional problems (Dittner, Rimes, & Thorpe, 2011; Kasser & Ryan, 1996; Lazaratou et al., 2010; Luthar & Becker, 2002; Wei & Zhang, 2008). According to this line of thought, the link

between parental achievement values and emotional problems may depend on the amount of perceived achievement pressure. Compared to parental achievement *values* (which measures how strongly parents emphasize their child's achievement), the relationship between achievement *pressure* (which measures parental *behavior* with the aim of influencing children to achieve better) and emotional problems is more thoroughly studied and supported in the research literature. Although parental achievement values and pressure are usually linked, it is possible to hold strong achievement values without pressuring the child to excel academically. Parents can exert academic pressure in many ways, such as conditional rewards (e.g. going to the cinema with friends) or punishments (e.g. not being allowed to participate in desired leisure activities), depending on the child's academic results. Another way of exerting academic pressure is through parental *comparison*; that is, by explicitly comparing their child's achievement to that of others (e.g. siblings or peers).

1.4. Shortcomings of Previous Research

In the vast literature and research on emotional problems in children and adolescents, there is a need for additional knowledge about *preadolescents* in particular, and there are many questions in need of more exploration. Many of these questions are related to possible risk factors for emotional problems in preadolescents with immigrant background, such as, economic hardship, gender, and age, as well as the association of specific immigrant background with emotional problems. Given the school's central role in building the foundation for future social and economic integration of immigrant preadolescents in the majority society, the need for exploration of the role of school and family factors on emotional problems is particularly ripe for further investigation. Especially parental achievement values, comparison, as well as family and school hassles, demand thorough investigation among other school-related variables. In sum, the following questions are considered as particularly relevant for further exploration:

- Are gender differences in emotional problems found in preadolescents with immigrant background?
- Are parental achievement values linked to emotional problems in preadolescents with immigrant background?
- Are specific immigrant groups of preadolescents more likely to display specific types of emotional problems?

These are precisely the questions explored in this thesis.

2. RESEARCH AIMS

The thesis has two general aims:

- (1) Contribution to knowledge about emotional problems among preadolescents with immigrant background
- (2) Investigation of the risk and protective factors, particularly family and academic factors, for preadolescent emotional problems across ethnic status (immigrant and non-immigrant background) and across specific immigrant groups.

Each one of the papers below contributes uniquely to both general aims.

Specific Aims of Paper I

To assess whether the gender gap (i.e., the higher rate of emotional problems in girls, as compared to boys) is found in preadolescents with immigrant and non-immigrant background, and to investigate whether a possible gender and immigrant difference in emotional problems can be accounted for by differences in home or school hassles.

Specific Aims of Paper II

The first aim was to assess if preadolescents with immigrant background report stronger parental achievement values and comparison, compared to non-immigrant peers. Parental achievement values are defined by “how strongly parents emphasize the child’s achievement”, and comparison is defined by “explicit comparison of the child’s achievement to that of others (e.g. siblings or peers)”. The second aim was to test if comparison mediated the relationship between parental achievement values and emotional problems, and if this relationship was stronger for preadolescents with immigrant background.

Specific Aims of Paper III

To identify profiles (“latent classes”) of preadolescents with distinct types of emotional problems in a multiethnic sample in Norway, and to investigate whether preadolescents with immigrant background from Pakistan, Turkey and Sri Lanka are overrepresented in specific profiles.

3. MATERIALS AND METHODS

3.1. Sample and Procedure

3.1.1. Data Collection

Data for this study was provided by the Youth, Culture and Competence (YCC) study undertaken by the Norwegian Institute of Public Health and approved by the Regional Committee for Medical Research Ethics (REC). The YCC is a longitudinal research program that studies the role of immigration and ethnicity in children's developmental trajectories.

First-wave data was used, which was collected during 2006 and 2007 in two cities in Norway that differ in terms of their immigrant population: Oslo (the capital and home of the country's largest immigrant population, which makes up 27% of the capital's entire population), and Bergen (a city in which the immigrant population is of the same relative size as the country's average: 11%, (Statistics Norway, 2011)). Bergen is also similar to the Norwegian average in terms of the relative sizes of what are called Western and non-Western immigrants, whereas the percentage of non-Western immigrants is almost three times as large in Oslo as in Bergen (Statistics Norway, 2011). Because data collection started in 2006, relevant statistics from as early as 2004 have been presented in Section 1.2.2.

Children attending grades 5 to 7 (aged 10 to 12 years) in 14 schools (of which 9 were in Oslo) were invited to participate in the study ($N = 1,603$). We selected schools in neighborhoods with a high percentage of immigrant families, because we intended to compare different ethnic minority groups in addition to ethnic Norwegians (majority). Thus, we needed to recruit a substantial number of participants in each ethnic group, and this would be easier to achieve in schools in multi-ethnic neighborhoods.

The children's parents were informed of the YCC through the child's school and asked to provide written informed consent if the child was to participate in the study (in accordance with REC guidelines (Regional Committees for Medical and Health Research Ethics, 2012)). In addition, we informed parents of the study through Turkish and Tamil cultural centers in Oslo. We targeted these groups for two reasons: The first is the need for more information on the mental health of children of Turkish and Tamil immigrants in Norway. The second is that these two groups differ in terms of migration motivation: One group comprises mainly labor migrants (Turkey), and the other comprises mainly refugees (ethnic Tamils from Sri Lanka) (Lie, 2004).

The YCC questionnaire was completed by the participants in their respective classrooms during two school hours. Of those recruited through cultural centers, 18 participants with Turkish background (40% of Turkish sample) and 4 with Tamil background (9% of Tamil sample) completed the questionnaire in their respective cultural centers. Research assistants were available if needed during data collection. Of the children invited, 1,042 preadolescents participated in the YCC, yielding a participation rate of 65%.

3.1.2. Identifying Immigrant and Non-Immigrant Groups

For ethical reasons, we were not allowed by the REC to directly ask participants about their ethnic background in the questionnaire. Thus, we relied on parental and grandparental place of birth in order to categorize participants according to national background. In the first phase of categorizing the participants, we grouped participants into three broad categories, which we labeled “ethnic status”: (1) immigrant background (n = 473, parents born abroad and at least 3 grandparents born abroad), (2) non-immigrant background (n = 476, parents born in Norway and at least 3 grandparents born in Norway), and (3) dual ethnic status (n = 91, one parent born in Norway and one parent born abroad). Participants with dual ethnic status were excluded from further analyses, because their complex mix of majority and specific minority backgrounds required special attention that exceeded the scope of this study. In the second phase of categorizing the participants, we grouped ethnic minority children into national groups according to maternal place of birth (there were a few participants whose parents were born in two different countries outside of Norway).

The result was a broad, although scattered representation of a total of 49 national backgrounds. The only countries containing more than 5% of the sample were: Norway (n = 485), Pakistan (n = 126), Turkey (n = 45), and Sri Lanka (n = 43). This meant that the individual immigrant groups were too small to test for analyses requiring higher statistical power, but they could be used for less complex analyses.

In the third phase of categorizing the participants, the ethnic minority group was divided into two main groups, according to a distinction used by Statistics Norway: (1) a group originating from the European Union or European Economic Area, the United States, Canada, Australia, and New Zealand, and (2) a group originating from European countries outside of the European Union, Asia, Africa, Latin-America, and countries in Oceania other than Australia and New Zealand (Lie, 2004; Statistics Norway, 2011). Since there were only 16 participants in group 1, they were excluded from analysis. Thus, immigrants in this sample consist of preadolescents

whose parents originate from Asia, Africa, Latin-America, and countries in Oceania other than Australia and New Zealand, as well as from European countries outside of the European Union or European Economic Area. In other words, immigrants included in this thesis are so-called non-Western immigrants, to use a politically obsolete term (since it refers to the Cold War), which nevertheless is easier to convey than the above, from Statistics Norway.

3.1.3. Sample

A total of 902 participants met the criteria for inclusion in the sample and were assigned to two categories of ethnic status: either immigrant or non-immigrant. This number was reached after excluding the following subgroups due to: uncertain endorsement of immigrant culture at home (dual ethnic status, $n = 91$), small regional sample (Western only and combined Western/Eastern immigrant background, $n = 25$), and unknown ethnic status ($n = 24$). Of the included participants, 47 % had immigrant background ($n = 427$). Boys and girls were evenly distributed in the sample. In terms of grade attendance, 30 %, 37 % and 33% respectively attended grades 5, 6, and 7 (respective ages are 10, 11, and 12 years roughly). Seventy-nine percent of the sample was from Oslo.

Otherwise, 47% ($n = 427$) of the sample had immigrant background, meaning that participants with immigrant background were overrepresented in line with the recruitment strategy of YCC. Thus, the sample is not representative of the Norwegian population. However, lack of representativeness does not weaken the associations found in this study (Nilsen et al., 2009). The sample reflects the efforts of the YCC team to recruit participants with an immigrant background, even though the study of specific immigrant groups was not possible in this particular analysis. Among participants with an immigrant background, 70% were second-generation. Among first-generation, 24% had lived their whole lives in Norway (i.e., parents were temporarily abroad at the time of the participant's birth, or moved to Norway shortly after the participant's birth), and the rest of the group had a mean length of residence in Norway of 6 years.

3.2. Measures

3.2.1. Measures Included in All Papers

Emotional problems were measured by the Norwegian self-report version of the emotional symptoms scale of the Strengths and Difficulties Questionnaire (SDQ-S) [43]. The emotional symptoms scale consists of five items: "I get a lot of headaches, stomach aches or

sickness”, “I worry a lot”, “I am often unhappy, depressed or tearful”, “I am nervous in new situations. I easily lose confidence”, and “I have many fears, I am easily scared”. Each item is rated “not true” (rated 0), “somewhat true” (rated 1) or “certainly true” (rated 2), and a sum score ranging from 0 to 10 is computed. We used the standards from a large Norwegian study, which designate the range of emotional problem scores from 0 to 4 as low risk and present mean scores of 2.2 (SD = 1.9) for boys and 3.0 (SD = 2.2) for girls (Van Roy et al., 2006). The SDQ has adequate psychometric properties (Goodman, 2001) that have been replicated in Norway (Goodman, 2001; Heiervang, Goodman, & Goodman, 2008a; Ronning et al., 2004). The SDQ-S has been used with different ethnic groups, including Norwegians and mixed ethnicity samples (Heiervang et al., 2008a; Klineberg et al., 2006; Mullick & Goodman, 2001; Obel et al., 2004; Oppedal et al., 2005). In this sample, the emotional symptoms scale demonstrated satisfactory reliability ($\alpha = .68$). *School hassles* were measured with the question: “How often in the last year did you experience” specific hassles (Oppedal & Roysamb, 2004). There were five school hassles: “I am afraid of not being smart enough at school”, “Big problems in understanding the teacher when he/she is teaching”, “Big pressure from those around me to succeed and do well at school”, “Problems with one or more teachers”, “Arguments or problems with other(s) in class” ($\alpha = .57$). Each question was rated on a scale ranging from 0 (“no, never”) to 3 (“yes, very often”), and summed scale scores were computed.

Economic hardship was measured with two items (in Paper I) from the scale “Adolescent Perceptions of Family Hardship” (Conger et al., 1999). The items were: “How often do your parents argue with each other about not having enough money?”, and “How often do you argue with your parents about not having enough money?” ($\alpha = .48$). They were rated on a scale ranging from 1 (“never”) to 5 (“always”). In Papers II and III, two additional items were included to improve the measure’s face validity: “How much of a problem does your family have because your parents do not have enough money to buy things your family needs or wants?”, and “How upset or worried are your parents because they do not have enough money?”. These last items were rated on a scale ranging from 1 (“not at all”) to 4 (“very much”). In Papers II and III all four economic hardship-items were standardized and a mean score was computed ($\alpha = .65$).

3.2.2. Measures Only Included in Paper I

As with school hassles, home hassles were measured with the question: “How often in the last year did you experience” specific hassles (Oppedal & Roysamb, 2004). Home hassles were: “My parents are away from home a lot (because of work or other activity)”, “I have too much responsibility at home (for smaller siblings, housework, or other activity)”, “I hear my parents argue”, “My parents fight with each other”, “Worries because someone in my family drinks too much alcohol”, “Worries because someone in my family is sad or frustrated”, “Arguments or conflicts with Mom or Dad”, “Worries because one of my siblings are in deep trouble”, and “Problems because my parents are much more strict than other parents” ($\alpha = .69$).

3.2.3. Measures Only Included in Paper II

Parental achievement values (Kim, 1997) measured how preadolescents perceive parental emphasis on achievement. Four items were rated on the Likert scale ranging from 1 (“never”) to 5 (“always”) ($\alpha = 0.70$). The questions were: “My parents carefully monitor what I do in school”, “My parents think that doing well in school is very important”, “My parents say that I should work hard at everything I do”, and “My parents often ask me about schoolwork”.

Comparison measured how parents compared the child’s achievement with that of others (Sumer & Kagitcibasi, 2010). These items were developed by Sumer and Kagitsibaci (2010) and added to the comparison subscale of the EMBU-C scale. EMBU-C is a Swedish acronym for My Memories in Upbringing for Children (Markus, Lindhout, Boer, Hoogendijk, & Arrindell, 2003). This was due to their relevance in measuring parental rearing styles in collectivistic societies (Sumer & Kagitcibasi, 2010). Three of the added items concerned achievement comparison, and were included in the present study due to their relevance in tapping the construct “parental achievement pressure”. The achievement comparison items were: “My parents are more concerned about how I do relative to other children than what I actually accomplish”; “My parents compare my school performance with that of my friends” and “My parents compare my school performance with that of my siblings or relatives” ($\alpha = 0.63$). Each question was rated on a scale ranging from 1 (“never”) to 5 (“always”), and a mean score of the scale was computed. Also, one item from *home hassles* (see description above) was used in Paper II: “I have too much responsibility at home (for smaller siblings, housework, or other activity)”.

3.3. Statistical Methods

Preliminary analyses indicated that first and second-generation immigrants did not report statistically different levels of emotional problems and hypothesized risk factors. Thus, they were collapsed into one group in the analyses to increase power.

3.3.1. Paper I: Mediated Moderation

The level of significance was set at .05. We used SPSS version 17 [50] to conduct hierarchical regression to test the interaction effect of gender \times ethnic status on emotional problems, adjusting for the following confounding effects: living in the capital, economic hardship (a proxy for socioeconomic status), and school grade. These variables were controlled for because they have been associated with emotional problems in previous studies and after preliminary analyses of current data (Bijl et al., 1998; Fandrem, Sam, et al., 2009; Zahn-Waxler et al., 2000). The following categorical variables were dichotomized as: gender (0 = girls, 1 = boys), ethnic status (0 = immigrant, 1 = non-immigrant), city (0 = Bergen, 1 = Oslo), and school grade 5 (0 = 6th and 7th grade, 1 = 5th grade), school grade 6 (0 = 5th and 7th grade, 1 = 6th grade), and school grade 7 (0 = 5th and 6th grade, 1 = 7th grade). The reason why school grade was turned into dummy variables was due to the unexpected correlation with emotional problems. Sixth-grade attendance, and not the older seventh grade, was more strongly correlated with emotional problems.

By dichotomizing gender and ethnic status as explained above, the gender \times ethnic status interaction yielded the following groups (0 = immigrant boys, immigrant girls and non-immigrant girls; 1 = non-immigrant boys). This meant that we could compare non-immigrant boys with the remaining gender/ethnic status groups, but we could also infer information about the other groups by inverting the direction of the regression coefficients. We conducted an ANOVA to test if there were significant differences in emotional problems among the four groups, i.e. immigrant boys and girls and non-immigrant boys and girls.

We also tested whether the gender \times ethnic status interaction effect on emotional problems could be mediated through home or school hassles. For this, we used a mediated moderation model (Baron & Kenny, 1986). This model tests whether the interaction effect of gender and ethnic status on emotional problems is possibly mediated through home or school hassles. For example, with the variables in our study a mediated moderation model is supported if the following conditions are met: (1) the effect of gender \times ethnic status on the

mediator (i.e., school/home hassles) is significant, (2) the effect of gender \times ethnic status on the outcome variable (i.e., emotional problems) is significant, (3) the proposed mediator (school/home hassles) has a significant effect on the outcome variable after controlling for the interaction effect, and (4) the interaction effect on the outcome is substantially reduced after controlling for the mediator. Thus, mediated moderation is when the initial variable (an interaction) affects the outcome in the first condition (when the mediator is the outcome) and has a weaker effect on the outcome in the second condition (when the dependent variable is the outcome) (Baron & Kenny, 1986). Translating this to our analyses, we have mediated moderation when the interaction of gender \times ethnic status on emotional problems is weaker after introducing school hassles to the regression.

3.3.2. Paper II: Moderated Mediation

PAWS 18 (IBM Corp., 2012) was used to conduct a hierarchical regression in which we tested a moderator effect of immigrant background and parental achievement values on emotional problems, controlled for background and school-related variables. Background variables were entered in the first step, a covariate (school hassles), the possibly confounding school variables in the second step, the predictor-variable (parental achievement values) and the supposed moderator (immigrant background) in the third step and the product between the x-variable and the supposed moderator in the fourth step. If the product in the fourth step is significant, a moderator effect could be inferred. We then examined the possible mediating role of achievement comparison on the association between values and emotional problems among immigrant and non-immigrant preadolescents with the SPSS macro 'Process' developed by Hayes (Hayes, 2013). Because sampling distributions of indirect effects are seldomly normally distributed (Hayes, 2009), bootstrapping was performed to test the significance of the indirect effect among immigrant and non-immigrant preadolescents and of the difference between the magnitude of the indirect effect in these two groups. To estimate 95% confidence intervals (C.I.), 5000 bootstrap samples were drawn from the original sample (all with the same N as the original sample), as advised by Hayes (2009).

3.3.3. Paper III: Latent Class Analyses and Multinomial Logistic Regression

Latent class analysis reflects a holistic-interactionistic view of the individual. This implies that the individual is perceived as an organized whole where all aspects of developmental processes, like biological and environmental factors, gain meaning by their

role in the total functioning of the individual (Bergman & Magnusson, 1997). Latent class analysis was conducted to empirically identify subgroups or “classes” in the sample, in that each subgroup shared a similar response pattern (“classes”) of emotional problems. Also described as a categorical variant of factor analysis, LCA assumes that observed variables are indicators of an unobserved, latent categorical variable (Muthen & Muthen, 1998-2010). The basic premise of LCA is that within classes the symptoms are “locally independent”. In the case of this study, this means that the co-occurrence of specific emotional problem symptoms such as depressive, anxious or somatic symptoms (i.e., the participant’s responses to the *SDQ Emotional Problem Scale*) can be explained by an underlying classification of preadolescents into subclasses with similar patterns of symptoms. In other words, the goal of LCA was to identify the smallest number of subgroups with unique configurations of emotional problems that accounted for the associations between the items in the scale.

Although comprising heterogeneous characteristics, emotional problems are frequently studied as a single scale, thus potentially occluding information about which specific subtypes of emotional problems characterize certain groups and not others. In this study, LCA was utilized to identify data-driven risk subgroups of individuals with similar configurations/patterns of emotional problems. Then, MLR was used to describe how demographic and risk variables were associated with emotional problems subgroups, within a multiethnic sample of preadolescents (10-12 year olds) in Norway. To estimate the number of classes that best fit the data, an unconditional model with the full sample was used. Each emotional symptom indicator was included separately in the model in order to maintain as much information as possible regarding heterogeneity. This allowed us to investigate whether certain subgroups of preadolescents were more likely to display distinct patterns of emotional problems than others. Covariates were not used to inform class enumeration because research suggests this can lead to an over-extraction of classes (Masyn, 2013).

The LCA was accomplished using Mplus version 5, a statistical modelling program which can accommodate complex design methodology (Muthen & Muthen, 1998-2010). Models with 1 through 4 classes were estimated to determine the optimal number of classes that best fit the data. With LCA, there are multiple statistical indicators of model fit. The choice of best fitting model was achieved through a combination of statistical considerations, data and theory. Both the bootstrapped parametric likelihood ratio test and the Lo-Mendell-Rubin likelihood ratio test (LMR-LRT) assess the improvement in fit between competing models. A non-significant value ($p > .05$) suggests that the model with one class less provides a better fit to the data. The BIC and the sample-size adjusted BIC (SSA-BIC) are goodness of

fit measures across competing models: the lowest value on each criterion indicates the best fitting model. In this analysis, we chose the BIC and the LMR-LRT tests as our main indicators since they have been evaluated as the most reliable indicators in determining the number of latent classes (Nylund, Asparouhov, & Muthén, 2007). Finally, the best number of classes in terms of statistical fit indicators was assessed in terms of theoretical soundness.

The second part of the analyses consisted in examining how immigrant background (both generally, for all immigrants, and for the three largest specific immigrant groups in the sample) predicted membership in the different classes. We also assessed whether gender, city, grade level, school hassles, economic hardship and parental achievement values could distinguish between the specific classes. For this purpose we exported the class variable obtained in Mplus to PASW Statistics 18, Release Version 18.0.0 (IBM Corp., 2012), and conducted a *multinomial logistic regression* (MLR) with the groups that each individual had the maximum probability of belonging to (i.e. pseudo-class membership) as the dependent variable. We conducted separate MLRs for each immigrant groups: All immigrants, Pakistani background, Turkish background, and Sri Lankan background. Ethnic Norwegians were the reference group of all four immigrant groups, and results were reported as Odds Ratios (OR) with 95 percent Confidence Intervals (CI).

3.4. Missing Data

3.4.1. Paper I

We excluded participants with more than 7 missing items (27% of total items), keeping 99% of the sample ($n = 889$). We used an expectation-maximization algorithm to impute missing responses for the total of 26 items that were included in the analyses. The dependent variable was approximately normally distributed (skewness = .59, kurtosis problems = -.27), and values for home hassles (skewness = 1.05, kurtosis = 1.28) and school hassles (skewness = 1.37, kurtosis = 2.37) fell within acceptable values.

3.4.2. Paper II

We used an expectation-maximization algorithm to impute missing responses for each scale included in the analyses with more than one item. These were emotional problems, parental achievement values, achievement comparison, school hassles, domestic-chore burden, academic achievement and parental help with school work. Missing values were imputed if at least 50 % of the items had been completed by each participant. The scale with

the highest percentage of missing values was comparison (7.8% for non-imputed items and 3.2 % with imputed items). The number of cases for emotional problems was unchanged before and after imputation (N= 889). After imputation the number of valid cases increased from 742 to 849 (94.1 %). The imputed variables were approximately normally distributed: Emotional problems (skewness= 1.17 and kurtosis= 2.08), parental achievement values (skewness= - .73 and kurtosis= -.08), achievement comparison (skewness= .54 and kurtosis= -.44), academic achievement (skewness= -.49 and kurtosis= .08), while values for school hassles (skewness= .61 and kurtosis= -.28) and parental help with school work (skewness= 1.74 and kurtosis= 2.70) fell within acceptable values.

3.4.3. Paper III

Missing Data

The Mplus software uses a full information maximum likelihood estimation, which is a widely accepted way of handling missing data (Muthén & Shedden, 1999; Schafer & Graham, 2002). The covariance coverage for all variables ranged from 97.2% to 99.1%, well above minimum thresholds for establishing adequate coverage (Nylund et al., 2007). Four subjects were excluded from the analyses since their answers were missing in all indicators. Missing value analysis and an expectation-maximization algorithm were used to impute missing values for covariates using PASW Statistics 18 (IBM Corp., 2012).

4. MAIN FINDINGS

4.1. Findings of Paper I

The gender gap was only found among non-immigrant preadolescents. In the first paper, preadolescents were stratified into four different groups (immigrant boys, immigrant girls, non-immigrant boys, and non-immigrant girls). The relationship between both home and school hassles (difficulties related to the home and the school) and emotional problems was tested by a mediated moderation model. In this model, both home and school hassles were tested as mediators between the interaction (gender \times ethnic status) and emotional problems. Findings suggest that school hassles, but not home hassles, accounted for the higher levels of emotional symptoms in boys with immigrant background, as compared to boys with non-immigrant background.

4.2. Findings of Paper II

The second paper describes differences among immigrants and non-immigrants with respect to child-reported parental achievement values (i.e., how strongly parents emphasize the child's achievement), parental comparison (i.e., parents explicit comparison of their child's achievement with that of others), and emotional problems. Findings based on a moderated mediation model suggest that the relationship between parental achievement values and emotional problems was partly mediated through comparison, across immigrant background (the moderator). Only among preadolescents with immigrant background, comparison was linked to emotional problems.

4.3. Findings of Paper III

The third paper presents the data-driven classification of preadolescents in accordance to distinct response patterns with respect to emotional problems, in which three mutually distinct categories were identified through latent class analysis: Healthy, Borderline and Distressed. Findings based on multinomial logistic regression suggest that the odds of belonging to the Distressed- category, rather than the Healthy-category, were at least twice as high for preadolescents with immigrant background, compared to those with non-immigrant background. This was found both in the non-Western immigrant group and in the three largest immigrant groups (Pakistan, Turkey, and Sri Lanka). Furthermore, results suggest that already during preadolescence, immigrants and children of immigrants in Norway may be at higher risk for developing emotional problems.

5. DISCUSSION

5.1. Interpretation of the Findings

Findings from this thesis suggest that immigrant background may be related to emotional problems as early as in preadolescence, with preadolescents of immigrant backgrounds being more likely to be among the most emotionally distressed. This was observed both in general, as well as in the three largest specific immigrant groups in the sample. This finding is in accordance with the tendency to find higher levels of emotional problems in studies on immigrants in Norway, particularly among adults (Abebe et al., 2012).

Among adolescents and preadolescents, the research is more mixed, although the propensity to find higher levels of emotional problems in immigrants is also supported in this group (Abebe et al., 2012). Studies comparing immigrant and non-immigrant emotional problems which are based on self-reports that only include preadolescents are rare, both in Norway and internationally, implying that the current investigation contributes in attending to this research gap. Together, findings from this thesis, as well as other Norwegian and international studies, do not support the healthy immigrant effect among preadolescents and adolescents (Abebe et al., 2012; Belhadj Kouider et al., 2013; Stevens & Vollebergh, 2008). Even after controlling for factors that could potentially confound the relationship between immigrant background and emotional problems, such as economic hardship, immigrant background was still associated with higher levels of emotional problems and higher risk of belonging to the Distressed class. Thus, findings are in accordance with theories that implicate immigrant background with higher levels of emotional problems. These theories intend to explain higher rates of emotional problems in immigrants due to minority position in society, migration-induced stress, as well as specific cultural practices and characteristics (Stevens & Vollebergh, 2008).

To test possible risk and protective factors with particular relevance to the school and family microsystems, a number of variables were analyzed. The effects of economic hardship, and school hassles, were quite consistent across the three specific immigrant groups (Pakistan, Turkey, and Sri Lanka). This consistency of findings across immigrant groups suggests that preadolescents from Pakistan, Turkey and Sri Lanka may react similarly to certain risk factors such as economic hardship and school hassles. It is not known at this stage why these groups would react similarly, although they share some group-level characteristics such as: non-Western immigrant background, lower socio-economic status, predominant physical and cultural distinctiveness from the ethnic Norwegian majority (which may predispose for

discrimination) (Fiske, 2000), reduced social network due to parental immigration, with related strain on the family, as well as lower parental cultural competence in the majority society and its institutions (such as the school system) (Chao, 2006).

5.1.1. Perspectives through the Bioecological Model

In order to contextualize risk and protective factors of emotional problems among immigrant and non-immigrant preadolescents, Bronfenbrenner's model (1979) was used. This model shows how factors, such as immigrant background, can interact with all levels of the model. From individual characteristics (such as physical salience through non-majority phenotype, and the use of cultural symbols like the hijab) to the cultural values and norms embedded in the macrosystem, immigrant background both influences and is influenced by the individual and the surrounding systems. Positive outcomes in preadolescents, such as academic achievement, are more likely if systems are mutually supportive (Luster & McAdoo, 1996). In this thesis, we find that in spite of immigrants' reporting higher parental achievement values, which tend to support academic achievement, they also report factors which could conflict with academic achievement. These factors are lower levels of parental help with homework, and higher levels of comparison and school hassles. This suggests that, based on preadolescent reports at group-level, the interaction between immigrant preadolescents with their family and school microsystems may not be optimally supportive of academic achievement, and emotional well-being.

The fact that the three identified latent classes (Healthy, Borderline and Distressed) were characterized by levels of emotional problems suggests that differences in emotional problems are primarily quantitative rather than qualitative, at least as measured by the emotional symptoms scale of the SDQ in preadolescents. If qualitatively distinct classes had been identified (e.g., a «depression» class and a «somatization» class) and associations between specific ethnic groups and classes (e.g., one ethnic group associated primarily with one class), such a finding would have posed a challenge to the notion that the expression of emotional problems is similar across ethnic groups. Thus, the finding of classes differing in degree of severity is a way of supporting similarity across ethnic status in the expression of emotional problems, which has previously been found among older adolescents (Richter et al., 2011). This finding was observed among preadolescents in this study, in comparisons between non-immigrants and both immigrants in general, and within the three largest immigrant groups

In terms of the continuous versus categorical operationalization of emotional problems across papers, the main advantage of using emotional problems as a continuous variable (as in Papers I and II) is to capture more variability and increase power (MacCallum, Shaobo Zhang, Kristopher J. Preacher, & Derek D. Rucker, 2002). In contrast, the Distressed class resembles a categorical cut-off point. However, when seen within research field of latent class analysis, the findings derived from the classes identified in Paper III justify the apparently simplistic operationalization of emotional problems applied in the paper. Moreover, studies on latent classes of emotional problems among immigrant (pre)adolescents are rare, and this thesis serves as a contribution to the field (Carragher et al., 2009; Lincoln, Chatters, Taylor, & Jackson, 2007; van Lang, Ferdinand, Ormel, & Verhulst, 2006; Wadsworth, Hudziak, Heath, & Achenbach, 2001).

5.1.2. Parental Achievement Values and Comparison

In addition to emotional problems, preadolescents with immigrant background reported higher levels of parental achievement values and parental comparison, as well as school and family hassles. There is a positive association between parental achievement values, comparison and emotional problems, which is stronger among immigrant preadolescents, as compared to non-immigrants. The relationship between comparison and emotional problems was only significant among preadolescents with immigrant background. Findings in this study suggest, based on reports by preadolescents of their parents' values and behavior, that immigrant compared to non-immigrant parents hold more positive values towards their children's academic achievement. These findings are in line with Norwegian (Aalandslid, 2009; Frøyland & Gjerustad, 2012; Lauglo, 1999; Lien, Haavet, Thoresen, Heyerdahl, & Bjertness, 2007), and international studies, particularly those of Asian immigrants in the US (Fuligni, 1997; Hao & Woo, 2012; Kao & Tienda, 1995; Pong & Landale, 2012). Also, immigrant (compared to non-immigrant) parents appear to exert stronger pressure through comparison, which has also support from other studies from Turkey and Korea (Kim, 1997; Sumer & Kagıtcıbası, 2010).

Immigrant parents, at group-level, may be more ambitious than non-immigrants because immigration by itself may select ambitious individuals (Hao & Woo, 2012). According to this line of thought, these individuals are willing to pay the price of loss of social network and cultural competence in order to achieve social mobility for themselves or their children in the new country (Kao & Tienda, 1995). The fact that first-generation

immigrants sometimes have to postpone social mobility for the next generation, may explain why second-generation immigrants report more parental academic values and comparison (Frøyland & Gjerustad, 2012; Hao & Bonstead-Bruns, 1998; Lauglo, 1999). It is also noteworthy that comparison is only associated with emotional problems among immigrant preadolescents in the present study. Collectivistic parenting strategies which promote interdependent bonds between generations may strengthen the association between parental and preadolescent behavior (Stevens & Vollebergh, 2008). Another source of explanation could be the relatively low emphasis of academic achievement among ethnic Norwegian parents. Norway is one of the most socially egalitarian countries in the world in which additional higher education pays the least (Martins & Pereira, 2004). It is possible that within this social context, Norwegian parents may not have the same eagerness and urgency in pushing their children towards academic achievement.

5.1.3. Gender Gap in Emotional Problems

The gender gap in emotional problems, which is a well-replicated finding during adolescence (Wade, Cairney, & Pevalin, 2002), was also found among preadolescents in this thesis. Findings from this thesis suggest that the gender gap was only found among non-immigrants, and was absent among immigrants. However, one should keep in mind that the gender gap may appear later among immigrant groups than it does among non-immigrants (Oppedal, 2008; Oppedal et al., 2005; Sagatun et al., 2008).

School hassles, but not home hassles, accounted for the combined gender and ethnic status differences in the study sample. This means that low levels of school hassles among non-immigrant boys in part accounted for their low levels of emotional problems, as compared to the three other gender/ethnic status groups (non-immigrant girls, immigrant girls and immigrant boys). So, at first glance the non-immigrant boys'-subgroup stands out (Fandrem, Sam, et al., 2009; Kistner et al., 2007; Lien, 2008; Oppedal & Roysamb, 2004; Sagatun et al., 2008). Furthermore, it seems that one of the protective factors for non-immigrant boys' emotional health is their low reports of school hassles in the present study. Alternatively, it could be argued that it is not the non-immigrant boys that stand out as a group due to low levels of emotional problems but the immigrant boys for their relatively high levels in spite of their protective gender. As mentioned previously, emotional problem scores for majority boys and girls in this study are quite consistent with those in a large Norwegian epidemiological study with a comparable age group (Van Roy et al., 2006). This consistency

in the emotional problems of majority boys may indicate that the immigrant boys are the ones with levels of emotional problems above the expected.

To illustrate how gender can influence emotional problems from the individual levels (such as hormones related to higher levels of emotional problems in adolescent girls (Zahn-Waxler et al., 2006)) to the macrosystem (such as norms about how girls can express distress, (Hill & Needham, 2013)), the Bioecological model can be helpful. The school system has been criticized for favoring girls' behavior expression (Houtte, 2004). This has been suggested as an explanation for the poorer school results and higher school drop-out rates among boys, as compared to girls. These findings are supported by this thesis. In addition, one recent study found that immigrant girls have lower school drop-out rates than non-immigrants, outperforming ethnic Norwegian girls in this aspect (Aalandslid, 2009). The high levels of emotional problems reported by immigrant boys, appear to level out boys' and girls' scores, and contributes to the absence of the gender gap among immigrant preadolescents (Alves et al., 2011; Kistner et al., 2007) and early adolescents (Fandrem, Sam, et al., 2009; Lien, 2008; Obel et al., 2004). This finding may be understood in light of several factors, most of which interact across all systems in Bronfenbrenner's model:

- minority status (Fiske, 2002; Kistner et al., 2007) as reflected, for instance, at the individual level through physical appearance,
- negative stereotypes of immigrants, which are quite different for boys and girls (Brown, Alabi, Huynh, & Masten, 2011; Fiske, 2002),
- school hassles (Alves et al., 2011; Kistner et al., 2007; Oppedal & Roysamb, 2004; Sund, Larsson, & Wichstrom, 2003) and family expectations for boys versus girls, which may be stronger in traditional non-Western immigrant families (Kim, 1997; Pels & Haan, 2003), and
- the mutual influence of stronger school hassles and stronger parental expectations at home for immigrant boys (Chen & Stevenson, 1995; Hegna, 2013; Lauglo, 1999).

The way in which particular immigrant groups are viewed in the majority society is highly relevant. Groups can be viewed as model minorities, such as the Tamil in Norway, or become stigmatized as underachieving (Engebriksen & Fuglerud, 2009). As regards the first group, exaggerated pressure to achieve (both personal and from others, such as parents) is likely to be part in explaining the relationship between immigrant background and emotional problems. As regards the second group, it has been suggested that members of stigmatized groups, whose academic achievement is stereotyped as poor, may decrease their identification with academic performance as a strategy to cope with this negative stereotype (Bakken, 2003;

Kistner et al., 2007; Steele, 2003). One way of coping with the fear of becoming “one of the typical immigrants who achieve poorly”, is to refrain from identifying with academic performance. This may imply that preadolescents stop trying to perform well academically, and do not care about performing well. In the short run, this will protect their self-esteem. However, this strategy may increase emotional problems in the long run, as societal demands increase (i.e. entrance exam requirements) and school hassles accumulate (Steele, 2003).

Another factor that could explain more emotional problems among immigrant boys, as compared to non-immigrant peers is “being different from the norm” (either physically or culturally) (Brown et al., 2011; Fiske, 2002). Physical or cultural salience may put preadolescent immigrant boys at a higher risk of developing emotional problems than what would otherwise be expected in boys. Concerning this aspect, girls could be perceived as less vulnerable than boys. This could be because girls can cope better with their minority status since their gender gives them practice in being placed in a lower place in social hierarchy (Shorter-Gooden, 2004), or because girls may be less exposed to discrimination than boys (Chuang & Tamis-LeMonda, 2009). In addition, parents from predominantly traditional collectivistic cultures may pressure boys more than girls to achieve academically, since boys traditionally will have the responsibility for taking care of the whole family (parents, grandparents, siblings) when they grow up (Kagitcibasi, 1996; Kim, 1997). This could lead to a larger gap between immigrant boys’ pressure and well-being, as compared to immigrant girls.

5.2. Limitations Related to Validity and Reliability

5.2.1. Internal Validity

Internal validity refers to whether observed covariation between two variables (A and B) reflects a causal relationship (Shadish, Cook & Campbell, 2002). In order to establish causal relationship, three criteria should be fulfilled:

1. A must precede B in time
2. There must be covariation between them
3. There should be no other plausible explanation for their relationship.

Causal order is a problem in nonexperimental research, especially in cross-sectional work, which is precisely the study design underlying this thesis. The measurement of the outcome (levels/classes of emotional problems) and presumed risk factors, such as school hassles and parental achievement values, was carried out during the same point in time.

Preadolescents may have reported more school hassles as a consequence of more emotional problems, and not the other way around. The cross-sectional design leads to uncertainty as to whether risk factors in fact temporally preceded emotional problems. Even though the models that were used suggest causal pathways, the nature of the data at hand does not allow for causal inference for the study's hypotheses.

Perhaps the largest limitation of the thesis is that associations could be due to an unknown third variable, such as the association between comparison and emotional problems. Similarly, the heightened odds of children of immigrants belonging to the Distressed class, may be due to unknown factors. Several variables were controlled for, in order to limit the influence of variables which have been proposed by other researchers as possible "third variable" candidates. Still, the possibility that an unknown third variable is involved in the associations presented in this thesis, cannot be dismissed.

Perhaps, we could have been more insistent in emphasizing that all measures are based on preadolescent self-reports: including reports regarding parental characteristics. In addition, the measures in this study are all subjective, not objective. Considering informant variability with measures such as emotional problems (Belhadj Kouider et al., 2013; Stevens & Vollebergh, 2008), the study would have been strengthened by multiple assessment methods, such as by parents and teachers. Another limitation threat that may influence internal validity is "history" which refers to aspects of the particular setting and timing of data collection (Shadish, Cook, & Campbell, 2002). For instance, it is plausible that several situations could affect participants' motivation to fill out the questionnaire or their interpretation of mental health. Examples are administering the SDQ during school hours (as opposed to after school), and dramatic events that take place right before data collection in one school or city (as opposed to another).

Even if all studies were administered during the same time of the day and after the same dramatic event, school environments still would differ, and preadolescents would not understand the questions in the same way. Preadolescents have different associations to words, and there are shared connotations of expressions within a cultural group. Likewise, preadolescents who fail to understand inversed questions and systematically respond contrarily, constitute a threat to the inner validity of the study by either over- or underestimating the size of the relationships between variables. The term "attrition", as applied within internal validity, is an additional threat, and refers to participants' failure to complete important measures. Even though participation rate in the study is satisfactory (approximately 65 % participation rate, which is in line with comparable studies), non-

participants may differ from participants in terms of emotional problems, parental achievement values, comparison or school hassles. This could bias the reported findings.

5.2.2. Reliability and Construct Validity

Unlike more tangible human qualities such as height and weight, psychological constructs including emotional problems do not have widely agreed-upon measures such as kilos, pounds or meters (Shadish et al., 2002). Similarly, disagreement about how to define and operationalize abstract concepts is more likely to occur, than is the case with height or weight. These aspects have been referred to as the “twin problems of construct validity”: understanding constructs and assessing them” (Shadish et al., 2002, p. 65). In order to conduct research, there is a need to operationalize abstract constructs. This frequently leads to inaccuracy, which researchers strive to limit. Although most operationalizations are inaccurate representations of constructs, they are necessary. In addition, operationalizations are important because they: (i) connect the operations used in research to relevant literature and to those who may eventually apply research findings; (ii) encompass social, political and economic implications which may yield support or criticism; and (iii) create basic concepts, which is one of the tasks of all science (Shadish et al., 2002).

It can be questioned whether five questions sufficiently encompass the construct “emotional problems”, as was done in this thesis. In addition, implying group differences such as “preadolescents with immigrant background report more comparison than ethnic Norwegian peers” should be done cautiously. This is because inferences such as “groups report more than others” may easily be misinterpreted as “groups *are* more” depressed or anxious than others. Researchers should bear in mind how their claims may be interpreted by those who are unfamiliar with research terminology. When the effect of group differences is overestimated, inferences can be misused for political purposes, with possible implications for the groups involved. Especially, inferences about minorities, and stigmatized groups should be handled with caution for ethical reasons, and since stereotypes about ethnic groups could affect the interpretation and propagation of biased findings.

Furthermore, there is the issue of measurement invariance which refers to whether the same phenomenon is being measured across groups. In this thesis, the most relevant example is whether emotional problems are the same across ethnic status and immigrant groups. It is unknown whether the same phenomenon is underlying emotional symptoms reported by both children of immigrants and non-immigrants. Immigrants may simply report more extreme

values, without the implication that these values reflect more severe problems. Findings from Paper III identifying three latent classes of emotional problems which are characterized by levels of problems, suggest that the expression of emotional problem is similar across ethnic groups. These findings are supported by international and national studies in which the structure and measurement invariance of the emotional symptoms scale were tested (Richter et al., 2011; Van Roy et al., 2008). The inclusion of objective measures, such as age (instead of grade level), socio-economic status (instead of economic hardship), academic results (instead of perceived academic competence), would have strengthened the validity of findings. Some of these variables were implicated in somewhat unexpected results, such as higher age (i.e., grade level) was related to lower emotional problems.

The inclusion of pubertal development and acculturation measures would also have strengthened this study (Hayward, Gotlib, Schraedley, & Litt, 1999; Oppedal & Idsoe, 2012; Orellana, 2003). Pubertal development is associated with gender differences in emotional problems, although there has been evidence that pubertal development may be a better predictor of emotional problems than chronological age among ethnic majority than among minority girls (Hayward et al., 1999). It could be that the ethnic minority groups in the sample reached puberty later than ethnic Norwegians. This would postpone the gender gap among immigrants and could explain why the gender gap was not found in this group. In terms of acculturation, immigrants who are fluent in Norwegian language and competent in cultural codes (i.e., majority cultural competence) may have lower levels of emotional problems than those who are not as fluent or competent. However, whether majority cultural competence protects the mental health of immigrants may depend on their environment. For instance, one study did not find a positive relationship between majority cultural competence and mental health in schools with a high density of immigrant adolescents (Dalhaug, Oppedal, & Roysamb, 2011). In the near absence of majority students, knowledge about majority culture and language may not have been crucial to the adolescents' well-being. Another acculturation hassle of particular interest is discrimination (Fandrem, Strohmeier, et al., 2009; Jasinskaja-Lahti, Liebkind, Horenczyk, & Schmitz, 2003). Acculturation has a rich body of research which is highly relevant to the mental health of preadolescents with immigrant background (Berry, 2001; Rudmin, 2003; Sam et al., 2008). Yet, the focus of this study is *comparing* immigrant and non-immigrant mental emotional problems, and acculturation measures were only answered by immigrants in the YCC. Thus, acculturation measures are not included in this thesis. Where possible, both acculturation measures and pubertal development should be included in similar future studies.

5.2.3. Statistical Conclusion Validity

Statistical conclusion validity refers to the appropriate use of statistics to infer cause and effect, which can be broken down into two questions: (1) whether the presumed cause and effect covary, and (2) how strongly they covary (Shadish et al., 2002). Risks concerning inference (1) are either estimating that there is a causal relation when in fact there is none (also known as type I error) or claiming that there is no relation when in fact there is one (type II error) (Shadish et al., 2002). Threats related to inference (2) are either overestimating or underestimating the size of the relationship between variables.

We do not know the direction of the relationship between variables, such as parental academic values and filial emotional problems. Maybe high levels of emotional problems lead to high reports on parental achievement values. If the latter is the case, changing parental overemphasis on academic success will not alleviate filial emotional symptoms, since the cause would be entirely different. However, like many associations in psychology, this relationship may be bidirectional (ref Rutter), in which case lower emphasis on achievement by immigrant parents may alleviate emotional symptoms.

In terms of inference (2), and the threat of reporting small effects only for the sake of significance, Paper I reports significant findings with small effects. Nevertheless, the emphasis is not on the absolute size of the means, but on the relative gender differences between these means. Papers I and II include moderately sized group samples and could pose a threat to statistical conclusion validity, in the sense that even very small group differences could be significant (type I error). In Paper III, with specific immigrant groups and small samples, the opposite threat was imminent (type II error).

5.2.4. External Validity

External validity relates to whether inferences about a causal relationship can be transferred from research to persons, settings, treatments and outcomes inside and outside the study (Shadish et al., 2002). The sample includes several groups (age, ethnicity, gender, students from different schools, neighborhoods and cities), which increases external validity. However, this presents a threat to statistical conclusion validity, because heterogeneity may blur findings that could have materialized in homogeneous groups. In order to minimize this effect, it is recommended that the size of the sample must increase as different groups or conditions are added to the design (MacCallum et al., 2002). In spite of the moderate sample sizes in Papers I and II, satisfactory conclusions can be drawn and generalized to conditions

outside of the experiment. This differs from small-sized samples that threaten external validity and may lead to doubtful inferences due to poor statistical representation of the population.

Random school sampling could have been a positive addition to the study. Even though threatened by classroom nesting, random selection (combined with a moderate sample size) is a major strength when generalizing to the populations of Oslo and Bergen. This may, however, not be sufficient when generalizing to other parts of the country, with a different demography than the two largest cities in Norway. Also, the findings cannot be generalized to emotional disorders such as depression and anxiety, as they are largely based on a convenience sample with subclinical emotional problems.

An additional limitation of this thesis was that different immigrant groups were not analyzed in the first two papers. This was not possible given the dual priority of conducting moderation/mediation analyses, and controlling for a series of factors such as city, economic hardship, and age, which combined require a large sample size to yield adequate statistical power. Therefore, it was impossible to investigate distinct ethnic groups as originally planned in all papers, and different groups of non-Western minorities were collapsed together in Papers I and II. These groups are undoubtedly quite different in several aspects (socioeconomic status, reason for immigration, social stigma), but they also share several similarities, such as their status as ethnic minorities and immigrants or their likelihood of being physically distinct when compared to the ethnic Norwegian stereotype.

Another common denominator of the three immigrant groups is their predominantly collectivistic upbringing, which is more likely to stress family cohesion and shared values than an individualistic upbringing (as predominantly endorsed by most ethnic Norwegians). Because the categorization of ethnic status groups was based on self-reported parental place of birth, there are two other main misclassification issues: misclassification of minorities into the majority group and misclassification of majority into minority groups. The first group consists of preadolescents with parents born in Norway, but who have indigenous, religious or minority background and whose parents look different or/and hold different cultural values than those pertaining to the majority. The second group consists of preadolescents with parents born abroad by sojourners, that is, ethnic Norwegians preadolescents who were born while parents were temporarily abroad or emigrated to another country. However, misclassification was minimized since the collected data in this work about provided information about the birthplace of grandparents. In other words, the ethnic status distinction that was applied lacked precision, although its use was reasonable and pragmatic. This can be deduced from the similarity across the three largest immigrant groups in Paper III. Ideally,

the national groups should have been large enough for wider comparison, and this should be tackled in future studies.

The sample in this study is not statistically representative of Norway's population, neither at the national nor at the municipal level. Nevertheless, lack of representativeness does not undermine the significance of the correlations found in this study (Nilsen et al., 2009). Pakistanis, Turks and Sri Lankans constitute large immigrant groups in Norway. Samples as small as 43 individuals, imply the need for caution before extrapolating evaluations outside of the sample. Furthermore, these immigrant populations are not ethnically homogeneous. For instance, part of the Turk population in Norway consists of a Kurd ethnic minority. This example supports the need for more knowledge about emotional health in these groups, for which this study serves as a foundation and contribution.

5.3. Strengths and Implications

In spite of limitations, this thesis has major strengths. Even though the sample is not nationally representative, findings suggest that non-Western immigrant preadolescents in multi-ethnic urban neighborhoods in Norway have higher odds of reporting emotional distress. This is because non-participants tend to exclude the most distressed participants, who have a higher likelihood of neither attending school during data collection nor delivering consent forms to parents and teachers.

In addition, this study's findings indicate that the silent burden of emotional problems may already be more prominent in preadolescence among children of non-Western immigrants in urban multi-ethnic schools. The present results and analyses lead us to suggest that future studies should be made to investigate possible mechanisms implicated in this overrepresentation of children of immigrants among the emotionally distressed. Meanwhile, parents, teachers and others who work with preadolescents should be involved in formulating hypotheses about possible mechanisms to why preadolescents in Norway, with as different immigrant background as Pakistan, Turkey and Sri Lanka, appear to have such a similar profile of emotional problems and related risk factors. Also, parents, teachers, and health workers who routinely interact with preadolescents, should remain attentive in order to recognize problems and contact health care providers.

When comparing the magnitude of immigrant and non-immigrant odd ratios for belonging to the Distressed class, as compared to the Healthy class, the clinical relevance of this study is substantial. The results also replicates previous findings during adolescence

showing a gender gap in emotional problems, which sometimes emerge as early as preadolescence, as suggested for non-immigrants in this study. The explanatory effect of immigrant background on emotional symptoms was only 3%, which is small. Yet, small effects in social research are expected, and yet can have important implications (MacCallum et al., 2002). Rather than dismissing small effects, researchers should compare the relative size of effects (McCartney & Rosenthal, 2000). Following this line of thought the explanatory effect of immigrant background can be compared to that of gender, which is considered an important variable in the investigation of emotional problems. Yet gender accounted for 1% of the variance. In comparison, school hassles accounted for 12% of the variance in emotional problems in Paper I.

Findings suggest that the gender gap in emotional problems may be delayed among preadolescents with immigrant background in specific contexts. While the difficulties of recruiting immigrants are well-known in mental health research (Knight, Roosa, & Umaña-Taylor, 2009), this thesis is based on a moderate-sized sample of which 47 % had immigrant background. Even though the size of specific immigrant groups was below optimum, findings for the three largest immigrant groups were covered. It is imperative that mental health research rooms diversity, which includes immigrant groups who comprise a growing segment of the world's population. Researchers studying minorities face additional challenges compared to peers who do not study a specific population. These include recruitment issues such as translation fees, persuading immigrant parents to participate in mental health surveys, as well as the potential stigma of ethnic group-specific findings (Knight et al., 2009). These challenges certainly add difficulty to attaining knowledge about the mental health of immigrants, but surely do not alter the importance of including these groups in mental health research.

Another important strength of the thesis, is that a series of background and potentially confounding factors were systematically controlled, minimizing unintended effects on associations. By controlling for other variables that could confound the associations in the model (such as economic hardship, gender and grade level), the unique information about the central relationships in question was maintained in this work. Many studies do not control for these variables, which leads to important information being lost. The size of the sample enabled that a number of potentially confounding background and academic factors were controlled, and therefore, provides robustness for the present findings. Thus, the effects in this thesis are mainly small, but significant and robust (McCartney & Rosenthal, 2000). Lastly, this thesis bridges the findings between national Norwegian reports and the international

research community which can now refine or refute the present findings. In view of lacking research in the field, this work converges and supports the call for further research on the relationship between parental achievement values and emotional problems in adolescents, especially in groups in which comparison is commonplace.

In spite of the sole reliance on one type of source being a limitation, the thesis is based on the type of source which may appear to be the most reliable to obtain information about preadolescents' emotional problems: self-reports (McCartney & Rosenthal, 2000). There are indications that self-reports by preadolescents on their emotional problems are more accurate than reports by both parents and teachers (Heiervang et al., 2008b; Van Roy et al., 2008). According to preadolescent self-reports, immigrant parents display higher levels of achievement values than non-immigrant parents. This appears to be positive given that earlier studies have linked positive parental achievement values to academic success in adolescence (Jeynes, 2007; Sheldon & Epstein, 2005). Research shows that immigrant children may benefit from positive parental academic involvement (Hill & Tyson, 2009; Kao & Tienda, 1995), although this beneficial effect may only apply in the absence of parental pressure such as comparison (and other unknown variables that were not investigated in this study). However, according to preadolescent self-reports, immigrant parents also display higher levels of comparison, which is directly related to emotional problems in this thesis, and indirectly related through pressure in other studies. Until further studies are conducted, parents in general, especially parents of preadolescents who appear to be emotionally distressed, may do well in substituting comparison with other strategies to encourage their children's school achievement.

5.4. Future Directions

Future studies should examine the relationship between gender, ethnic background, and emotional problems longitudinally. If a causal link is suggested between school hassles and emotional problems, studies should further investigate which specific types of hassles are associated with these symptoms. The studies could have implications for understanding the mechanisms underlying emotional problems in preadolescence as well as for tailoring interventions to reduce symptoms. Based on present findings, it is particularly suggested that school-related hassles be included in further investigations. When possible, acculturation hassles should be included (Keles, Friborg, Idsøe, Sirin, & Oppedal, 2013; Oppedal & Idsøe, 2012). Future longitudinal studies should examine whether parental academic values, in fact

precede emotional problems in preadolescents, and whether parental support (or emotional warmth) can suppress the relationship between achievement pressure (personal or parental) and emotional problems. It would also be valuable to assess whether the findings of this study can be supported among immigrants from predominantly individualistic countries, where filial agreement with parental values is less widespread than in predominantly collectivistic countries. In the latter group of countries, parents tend to emphasize filial agreement (Kim, 1997) which could explain why there is a stronger link between parental achievement values and emotional problems among immigrants in this study (who are predominantly collectivistic on a group level), as compared to natives.

This suggests that the phenomenology of emotional problems may be similar across ethnic status and across the largest immigrant groups in the study. It would have been valuable to assess measurement invariance across ethnic background during preadolescence, to conduct latent class analyses of emotional problems with other instruments than the SDQ, and to follow the development of preadolescents in a longitudinal design. Possibly, different classes would have been identified with an older sample, or other immigrant samples. Longitudinally, information about subgroups could be tracked across developmental trajectories, from childhood and throughout adolescence when emotional problems are expected to increase and differentiate (for instance into pure depression or anxiety), and inform how subgroups develop in positive or negative ways, as well as related risk and protective factors. Additionally future studies on national groups should include large enough samples for improved and generalized comparisons. When addressing the effect of ethnic background on emotional problems, additional factors to consider are the “ethnic ratio” of the neighborhood (Wight et al., 2005) or schools (Dalhaug et al, 2011) where preadolescents live.

Furthermore, future studies would benefit from operationalizing parental academic values in a way that more readily distinguishes between intrinsic and extrinsic goals (Luthar & Becker, 2002). In this way, adaptive and maladaptive parental academic values could be more readily distinguished from each other. Future studies should examine the relationship between gender, ethnic background, and emotional problems longitudinally. The studies could have implications for understanding the mechanisms underlying emotional problems in preadolescence as well as for tailoring interventions to reduce symptoms. The inclusion of acculturation factors and pubertal development-variables to these analyses would add an improvement to similar future studies.

6. CONCLUSION

Immigrants and their Norwegian-born children comprise 14 % of the population in Norway, and 57 % of them have non-Western background (Statistics Norway, 2013). Upward social mobility is a powerful factor driving immigrants to settle in new countries, especially those moving from developing to industrialized countries. Immigrant parents tend to perceive education as a primary avenue through which social mobility can be achieved by their children in the new country (Horenczyk G, 2001). Given that social mobility is usually an integral motivation in immigrants, higher levels of parental achievement values (that is, attitudes that emphasize academic achievement) can be expected among immigrant parents, as compared to non-immigrant parents. In spite of reporting higher academic ambition (both parental and own), and using more time on homework activities, immigrant students perform, as a group, worse than ethnic majority students, particularly boys (Aalandslid, 2009; Frøyland & Gjerustad, 2012). Moreover, these factors have been associated with emotional problems in immigrant adolescents in Norway.

In Norway, studies based on self-reports comparing immigrant and non-immigrant emotional problems during (pre)adolescence, tend to find higher levels of problems among immigrants, although about half of the research literature finds equal levels of problems (Abebe et al., 2012). International studies, on the other hand, tend to find equal levels of emotional problems across ethnic status, with about half of the research literature finding higher levels of emotional problems among immigrants (Stevens & Vollebergh, 2008). Methodological differences across studies make it difficult to compare findings in the research literature (Abebe et al., 2012; Stevens & Vollebergh, 2008). This is due to differences in measurement, sources, immigrant populations, majority society, to name a few factors. One important question for researchers in this respect is whether the phenomenology of emotional problems is the same across immigrant and non-immigrant groups, as well as across specific immigrant groups. Another important question is whether demographic factors such as gender, socioeconomic status, age and other possible factors could account for higher levels of emotional problems among immigrants due to spurious correlations. These important questions are at the core of this thesis.

This thesis answered whether: (i) the expected gender gap in emotional problems is found among preadolescents across ethnic status, and whether school and family hassles could account for emotional problems; (ii) parental achievement values and comparison were associated with emotional problems in preadolescents with immigrant background as

compared to non-immigrants; and (iii) preadolescents with specific immigrant background are overrepresented in latent classes characterized by particular types of emotional problems.

Participants were enlisted from schools in urban Norwegian neighborhoods with a dense immigrant population in order to recruit a large immigrant sample, as well as an ethnic Norwegian sample for reference purposes. A questionnaire was developed and administered during school hours, including the Strength and Difficulties Questionnaire, EMBU-C, General Everyday Hassles and parental achievement values. Mediated moderation, moderated mediation, multinomial logistic regression and latent class analyses were conducted to test hypotheses within the aims of the thesis, while controlling for a number of relevant background and potentially confounding factors.

Findings from this thesis suggest that already from preadolescence immigrant preadolescents are more at risk for emotional problems than ethnic Norwegian peers. Possible risk factors, according to present findings are high parental achievement values that may lead to pressuring preadolescents to excel academically. One of the ways pressure can manifest itself is through a parenting style referred to as comparison. Another central risk factor for emotional problems in immigrant preadolescents is school hassles. Furthermore, latent class analysis suggests that preadolescents with different ethnic background report the expression of emotional problems in a similar manner. The findings also propose that the odds for belonging to the Distressed class (as compared to the Healthy class) were approximately the same for immigrant preadolescents from Pakistan, Turkey and Sri Lanka. This is somehow surprising, given the different cultures and reasons for immigration among these countries. Additionally, the findings suggest that preadolescent boys with immigrant (compared to non-immigrant) background do not benefit from their male gender, which is usually protective in terms of emotional problems. Among adolescents, girls are more likely to have more emotional problems than boys (i.e., the “gender gap” in emotional problems), and this finding has occasionally been found as early as during preadolescence. This was the case for ethnic Norwegian preadolescents in this study, but not for immigrant preadolescents. The higher levels of emotional problems among immigrant boys (relative to non-immigrant boys) was partly associated with higher levels of school hassles among immigrant boys, as compared to ethnic Norwegian peers. Sacrifices made by immigrant parents in order for the next generation to succeed in the new society, may increase the pressure on immigrant preadolescents to succeed in school (Syed et al., 2006). The pressure may be more palpable among boys than girls from traditional immigrant cultures, since boys traditionally are supposed to bear the responsibility for the family (Kim, 1997). Future research should include

larger specific immigrant groups which could be contrasted with ethnic Norwegians. Preferably, participants should be randomly sampled. In addition, future research should investigate the longitudinal interplay between emotional problems, parental achievement values, comparison, school hassles and family factors.

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Paper I



RESEARCH

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Emotional problems in preadolescents in Norway: the role of gender, ethnic minority status, and home- and school-related hassles

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Abstract

Background: "The gender gap" refers to a lifelong higher rate of emotional problems in girls, as compared to boys, that appears during adolescence. The gender gap is a well-replicated finding among older adolescents and is assumed to be a cross-cultural phenomenon. However, these cross-cultural studies have not investigated the gender gap in ethnic minorities but sampled ethnic majority adolescents in different countries. Some studies that investigated the gender gap across ethnic groups indirectly (by presenting emotional problem scores stratified by gender and ethnic group) indicate that the gender gap is less prominent or even absent among minorities. The aims of this study were to assess whether the gender gap is found in both majority and minority preadolescents, and to investigate whether a possible (gender and ethnic) group difference can be accounted for by differences in home or school hassles.

Methods: Participants were 902 preadolescent students (aged 10 to 12) from two cities in Norway. We collected self-report measures of emotional problems and home and school hassles. Using mediated moderation analysis we tested whether the interaction effect between gender and ethnic minority background on emotional problems was mediated by home or school hassles.

Results: The gender gap in emotional problems was restricted to ethnic majority preadolescents. School hassles but not home hassles accounted in part for this effect.

Conclusions: The absence of the gender gap among minority as opposed to majority preadolescents may indicate that social circumstances may postpone or hamper the emergence and magnitude of the gender gap in ethnic minority preadolescents. In this study, school hassles partly accounted for the combined gender and ethnic group differences on emotional problems. This indicates that school hassles may play a role in the higher levels of emotional problems in preadolescent minority boys and consequently the absence of a gender gap found in our minority sample.

Background

Emotional (or internalizing) problems include symptoms of depression, anxiety, and withdrawal and are characterized by intropunitive emotions such as sorrow, guilt, fear, and worry [1]. Emotional problems in preadolescents have serious concurrent consequences; they can, for instance, hamper academic success [2,3] and peer relations [4,5]. The presence of these problems at an early age may also predict higher risk of mental and physical

disease in middle age [6,7]. It is therefore important to be able to detect and treat emotional problems as early as possible.

One route to attaining a better understanding of emotional problems is to examine why they are more prominent in some groups than in others. One group that has captured the attention of researchers studying emotional problems is ethnic minorities. Among the hypothesized reasons for higher rates of emotional problems in minority groups are social exclusion and discrimination, and for immigrant minorities, difficulties adapting to the new society of settlement. Nevertheless, findings in the field are inconsistent, and some studies find that minorities

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are more likely to have emotional problems than ethnic majorities, whereas others find the opposite [8]. Findings can vary across different ethnic minorities living in the same country [9], the same minority group in different countries [10], and depending on whom the informant is [8] and the informant's ethnic background [11]. Moreover, minority versus majority differences in emotional problems have also been found to be different for girls and boys [12].

The literature encompassing gender differences in emotional problems is dominated by studies on depression, both clinical and subclinical. Nevertheless, a well-replicated finding concerning emotional problems in general is that girls in late adolescence are at least twice as likely as boys to become depressed [13-15] or anxious [1], and this gender ratio continues throughout adulthood [1,14]: see Sun [16] for an exception). The term "gender gap" refers to the higher levels of emotional problems in girls as compared to boys [17]. The gender gap has been found repeatedly in samples comprising predominantly ethnic majority adolescents, or in samples in which ethnicity was not specifically investigated [1,13,14,18,19].

Although the gender gap is assumed to be a cross-cultural phenomenon [1,20], the studies that support this finding do not investigate ethnic minorities but (predominantly) ethnic majority adolescents in different countries [20,21]. The term "ethnic minorities" refers to groups that differ from the ethnic group that is considered the norm in a country. In particular, we focus here on minorities whose physical characteristics are distinct from those of the "norm" population and are underrepresented in powerful positions in the majority society. To the best of our knowledge, there is no study directly questioning the existence of the gender gap in ethnic minority samples; in other words, we found no study directly questioning whether the finding that girls have more emotional problems than boys, can be extended to ethnic minority populations. Moreover, there is only one study that implicitly questions the gender gap through findings that compare depressive symptoms across gender and ethnic background [22]. In this study the gender gap is only found in ethnic majority preadolescents. Otherwise, most studies that include both ethnic majority and minority groups while also assessing the effects of gender on emotional problems do not focus on gender differences across ethnic groups but on ethnic differences across gender [10,12,15,23-26]. These studies find that a larger gender gap (i.e., higher levels of emotional problems in girls as compared to boys) seems to be either restricted to or substantially more prominent among adolescents of ethnic majority background [15,22,24-27]; for exceptions, see [26,28]. Studies that only include older minority adolescents (aged 15 and older) suggest that the gender gap may emerge later in ethnic minority adolescents [29,30]. In

these older minority samples, the gender gap is replicated with girls reporting higher scores of emotional problems than boys.

The scarce literature on this topic provides limited theoretical accounts as to why the gender difference in emotional problems does not seem to be found as readily in minorities during preadolescence as it is in majority adolescents. However, two studies that investigated emotional problems across gender and ethnic background before age 15 found that minority boys show higher levels of emotional problems than majority boys [22,29]. These studies use this finding to explain the lack of gender differences in minorities. Following this line of thought, high emotional problem scores in girls (minority or not) are expected, while similar scores in boys are unexpected. Moreover, when minority boys' emotional problems are unexpectedly high, the gender gap in the minority group is diminished and sometimes nonexistent. There may be particular social circumstances that inflate minority boys' emotional problems in preadolescence which help explain the later emergence of the gender gap in minorities. Hypothesized risk factors involved may be related to discrimination due to physical and cultural attributes [31], factors related to masculine gender roles in different ethnic groups [8], and problems in the family [32] and at school [22,32,33]. Preadolescent minority boys may not experience some of the social circumstances associated with their "protective" (in terms of emotional problems) gender. Alternatively, minorities may experience hassles that exacerbate emotional problems, and minority boys may be particularly sensitive to some of these hassles. Thus, minorities' levels of emotional problems would be higher than for majority peers, and the differences between minority girls' and boys' levels of emotional problems (i.e., the gender gap) would be smaller. In other words, we could look for clues concerning the gender gap by investigating the "ethnic gap" between minority and majority boys.

As compared to adolescence, findings in preadolescence (i.e., the period between the approximate ages of 9 and 12 [34]) are more mixed. Although emotional problems in preadolescence are less common than in adolescents [1], when these problems do occur they should be taken seriously. Compared to externalizing problems (such as hyperactivity and conduct problems), emotional problems are less visible and disruptive to others. It may therefore take longer for the home or school environment to detect and help these preadolescents. Failure to detect emotional problems early can therefore prolong unnecessary suffering.

Among studies investigating only ethnic majority preadolescents, three diverging results emerged: (1) no gender difference in emotional problems before puberty or until age 13 [35,36], (2) boys had more emotional problems

than girls [37,38], and (3) girls had more emotional problems than boys [19]. These mixed results show that while the gender gap is a well replicated finding among adolescent majorities, this is not the case among preadolescent majorities. Although some of the mixed results may be due to different measures of emotional problems and/or different levels of pubertal maturity in samples across studies, they do indicate a need for more studies investigating emotional problems in preadolescents.

Some studies suggest that social circumstances may play a role in explaining the gender gap in emotional problems [22,25]. School and home are two central life domains for the socialization of children and adolescents. For children with ethnic minority background the home is the main domain for enculturation (i.e., acquiring of own cultural skills and norms), whereas the school is the main domain for acculturation (i.e., changes resulting from contact with other cultural groups, in this case primarily majority culture) [39]. Majority children have an advantage over minority children, since there is a higher overlap between the rules and codes that they learn in their home environment and those that they learn in the school system.

Thus we aimed to investigate whether hassles related to home and school arenas can account for possible gender and ethnic differences in emotional problems. Moreover, it is important to understand why emotional problems are more common in certain groups. Emotional problems in adolescence have received more focus, and the findings for preadolescence are less conclusive. In light of the scarcity of studies that examine possible gender differences across ethnic minority and majority preadolescents (as opposed to examining ethnic differences across gender), the aim of this study was two-fold: to investigate possible group differences in emotional problems related to both gender and ethnic minority status, and to investigate whether eventual higher levels of emotional problems in particular gender and ethnic minority groups can be explained by (mediated through) home and school hassles.

Methods

Data collection

Data for this study was provided by the Youth, Culture and Competence (YCC) study undertaken by the Norwegian Institute of Public Health and approved by the Regional Committee for Medical Research Ethics (REC). The YCC is a longitudinal research program that studies the role of immigration and ethnicity in children's developmental trajectories.

We used first-wave data collected during 2006 and 2007 in two cities in Norway that differ in terms of their immigrant population: Oslo (the capital and home of the country's largest immigrant population, which makes up 27% of the capital's entire population), and Bergen (a city in which the immigrant population is of the same relative

size as the country's average: 11%, [40]). Bergen is also similar to the Norwegian average in terms of the relative sizes of what are called Western and non-Western immigrants, whereas the percentage of non-Western immigrants is almost three times as large in Oslo as in Bergen [40]. Children attending grades 5 to 7 (aged 10 to 12 years) in 14 schools (of which 9 were in Oslo) were invited to participate in the study (N = 1603). We selected schools in neighborhoods with a high percentage of immigrant families, because we intended to compare different ethnic minority groups in addition to ethnic Norwegians (majority). Thus, we needed to recruit a substantial number of participants in each ethnic group, and this would be easier to achieve in schools in multi-ethnic neighborhoods.

The children's parents were informed of the YCC through the child's school and asked to provide written informed consent if the child was to participate in the study (in accordance with REC guidelines). In addition, we informed parents of the study through Turkish and Tamil cultural centers in Oslo. We targeted these groups for two reasons: The first is the need for more information on the mental health of children of Turkish and Tamil immigrants in Norway. The second is that these two groups differ in terms of migration motivation: One group comprises mainly labor migrants (Turkey), and the other comprises mainly refugees (ethnic Tamils from Sri Lanka) [41].

The YCC questionnaire was completed by the participants in their respective classrooms during two school hours. Of those recruited through cultural centers, 18 participants with Turkish background (40% of Turkish sample) and 4 with Tamil background (9% of Tamil sample) completed the questionnaire in their respective cultural centers. Research assistants were available if needed during data collection. Of the children invited, 1,042 children participated in the YCC, yielding a participation rate of 65%.

Identifying minority and majority groups

For ethical reasons, we were not allowed by the REC to directly ask participants about their ethnic background in the questionnaire. Thus, we relied on parental and grandparental place of birth in order to categorize participants according to national background. In the first phase of categorizing the participants, we grouped participants into three broad categories, which we labeled "ethnic status": (1) ethnic minority background (n = 473, parents born abroad and at least 3 grandparents born abroad), (2) ethnic majority background (n = 476, parents born in Norway and at least 3 grandparents born in Norway), and (3) double ethnic status (n = 91, one parent born in Norway and one parent born abroad). Participants with double ethnic status were excluded from further analyses, because their complex mix of majority and specific

minority backgrounds required special attention that exceeded the scope of this study.

In the second phase of categorizing the participants, we grouped ethnic minority children into national groups according to maternal place of birth (there were a few participants whose parents were born in two different countries outside of Norway). The result was a broad, although scattered representation of a total of 49 national backgrounds. The only countries containing more than 5% of the sample were: Norway ($n = 485$), Pakistan ($n = 126$), Turkey ($n = 45$), and Sri Lanka ($n = 43$). Thus, the ethnic minority groups were too small to test for the mediation of hassles on emotional problems across gender and specific ethnic background.

In the third phase of categorizing the participants, we divided the ethnic minority group into two main groups, according to a distinction used by Statistics Norway: (1) a group originating from the European Union or European Economic Area, the United States, Canada, Australia, and New Zealand, and (2) a group originating from European countries outside of the European Union, Asia, Africa, Latin-America, and countries in Oceania other than Australia and New Zealand [41,42]. Since there were only 16 participants in group 1, they were excluded from analysis.

Thus, ethnic minorities in this sample consist of preadolescents whose parents originate from European countries outside of the European Union or European Economic Area, the United States, Canada, Australia, and New Zealand, and who have at least 3 grandparents born abroad.

Sample

A total of 902 participants met the criteria for inclusion in the sample and were assigned to two categories of ethnic status: either ethnic minority or majority. As Table 1 shows, boys and girls were equally distributed in the sample. In terms of grade attendance, the percentages were 30% in grade 5, 37% in grade 6, and 33% in grade 7. Seventy-nine percent of the sample was from Oslo.

Otherwise, 47% of the sample had an ethnic minority background, meaning that participants with an immigrant background were overrepresented in line with the recruitment strategy of YCC. Thus, the sample is not representative of the Norwegian population. However, lack of representativeness does not weaken the associations found in this study. The sample reflects the efforts of the YCC team to recruit participants with an immigrant background, even though the study of specific immigrant groups was not possible in this particular analysis. Among participants with an immigrant background, 70% were Norwegian-born. Among those born abroad, 24% had lived their whole lives in Norway (i.e., parents were temporarily abroad at the time of the participant's birth, or moved to Norway shortly after the participant's birth), and the rest of the group had a mean length of residence in Norway of 6 years.

Measures

Emotional problems were measured by the Norwegian self-report version of the emotional problems subscale of the Strengths and Difficulties Questionnaire (SDQ-S)

Table 1 Correlations, and percentage (categorical variables) or means, standard deviations and range (continuous variables), $N = 902$.

Variable	%/M (SD) [Range]	2	3	4	5	6	7	8	9	10
1. Emotional problems	3.1 (2.3) [0-10]	.38**	.29**	-.19**	-.08*	.13**	.13**	.03	.08*	-.10**
2. School hassles	2.9 (2.3) [0-15]		.41**	-.09**	.04	.20**	.00	-.08*	.07*	.00
3. Home hassles	3.4 (3) [0-27]			.04	.10**	.36**	-.07*	-.03	.00	.03
4. Ethnic status (majority = 1)	53%				.01	.02	-.35**	.02	-.05	.03
5. Gender (boys = 1)	50%					.00	.01	-.03	.05	-.03
6. Perceived economic hardship	1.29 (.45) [2-10]						-.07*	-.06	.06	.00
7. City (Oslo = 1)	79%							.11**	-.05	-.05
8. Fifth grade (5 th grade = 1)	30%								-.50**	-.46**
9. Sixth grade (6 th grade = 1)	37%									-.54**
10. Seventh grade (7 th grade = 1)	33%									

Note: Percentages (%) for categorical variables; and means (M), standard deviations (SD) and ranges for continuous variables. * $p < .05$. ** $p < .01$. (two-tailed)

[43]. The emotional problems subscale consists of five items: "I get a lot of headaches, stomach aches or sickness", "I worry a lot", "I am often unhappy, depressed or tearful", "I am nervous in new situations. I easily lose confidence", and "I have many fears, I am easily scared". Each item is rated "not true" (rated 0), "somewhat true" (rated 1) or "certainly true" (rated 2), and a sum score ranging from 0 to 10 is computed. We used the standards from a large Norwegian study, which designate the range of emotional problem scores from 0 to 4 as low risk and present mean scores of 2.2 (SD = 1.9) for boys and 3.0 (SD = 2.2) for girls [19]. The SDQ has adequate psychometric properties [43] that have been replicated in Norway [19,44,45]. The SDQ-S has been used with different ethnic groups, including Norwegians and mixed ethnicity samples [29,45-48]. In this sample, the emotional problems scale demonstrated satisfactory reliability ($\alpha = .68$).

Both *home* and *school hassles* were measured with the question: "How often in the last year did you experience" specific hassles [25]. There were nine specific home hassles and five school hassles. Home hassles were: "My parents are away from home a lot (because of work or other activity)", "I have too much responsibility at home (for smaller siblings, housework, or other activity)", "I hear my parents argue", "My parents fight with each other", "Worries because someone in my family drinks too much alcohol", "Worries because someone in my family is sad or frustrated", "Arguments or conflicts with Mom or Dad", "Worries because one of my siblings are in deep trouble", and "Problems because my parents are much more strict than other parents" ($\alpha = .69$). School hassles were: "I am afraid of not being smart enough at school", "Big problems in understanding the teacher when he/she is teaching", "Big pressure from those around me to succeed and do well at school", "Problems with one or more teachers", "Arguments or problems with other(s) in class" ($\alpha = .57$). Each question was rated on a scale ranging from 0 ("no, never") to 3 ("yes, very often"), and summed scale scores were computed.

Economic hardship was measured with two items from the scale "Adolescent Perceptions of Family Hardship" [49]. The items were: "How often do your parents argue with each other about not having enough money?", and "How often do you argue with your parents about not having enough money?" ($\alpha = .48$). They were rated on a scale ranging from 1 ("never") to 5 ("always").

Missing values

We excluded participants with more than 7 missing items (27% of total items), keeping 99% of the sample ($n = 889$). We used an expectation-maximization algorithm to impute missing responses for the total of 26 items that were included in the analyses. The dependent variable was approximately normally distributed (skewness

= .59, kurtosis problems = -.27), and values for home hassles (skewness = 1.05, kurtosis = 1.28) and school hassles (skewness = 1.37, kurtosis = 2.37) fell within acceptable values.

Statistical analyses

The level of significance was set at .05. We used SPSS version 17 [50] to conduct hierarchical regression to test the interaction effect of gender * ethnic status on emotional problems, adjusting for the following confounding effects: living in the capital, economic hardship (a proxy for socioeconomic status), and school grade (a proxy for age). These variables were controlled for because they have previously been associated with emotional problems [1,8,24]. The following categorical variables were dichotomized as: gender (0 = girls, 1 = boys), ethnic status (0 = minority, 1 = majority), city (0 = Bergen, 1 = Oslo), and school grade 5 (0 = 6th and 7th grade, 1 = 5th grade), school grade 6 (0 = 5th and 7th grade, 1 = 6th grade), and school grade 7 (0 = 5th and 6th grade, 1 = 7th grade). By dichotomizing gender and ethnic status as explained above, the gender * ethnic status interaction yielded the following groups (0 = minority boys, minority girls and majority girls; 1 = majority boys). This meant that we could compare majority boys with the remaining gender/ethnic status groups, but we could also infer information about the other groups by inverting the direction of the regression coefficients. We conducted an ANOVA to test if there were significant differences in emotional problems among the four groups, i.e. minority boys and girls and majority boys and girls.

We also tested whether the gender * ethnic status interaction effect on emotional problems could be mediated through home or school hassles. For this, we used a mediated moderation model [51]. This model tests whether the interaction effect of gender and ethnic status on emotional problems is possibly mediated through home or school hassles. For example, with the variables in our study a mediated moderation model is supported if the following conditions are met: (1) the effect of gender * ethnic status on the mediator (i.e., school/home hassles) is significant, (2) the effect of gender * ethnic status on the outcome variable (i.e., emotional problems) is significant, (3) the proposed mediator (school/home hassles) has a significant effect on the outcome variable after controlling for the interaction effect, and (4) the interaction effect on the outcome is substantially reduced after controlling for the mediator. Thus, mediated moderation is when the initial variable (an interaction) affects the outcome in the first condition (when the mediator is the outcome) and has a weaker effect on the outcome in the second condition (when the dependent variable is the outcome) [51].

Translating this to our analyses, we have mediated moderation when the interaction of gender * ethnic status on emotional problems is weaker after introducing school hassles to the regression.

Results

We compared mean scores for emotional problems across the four groups of ethnic minority boys and girls, and ethnic majority boys and girls. An ANOVA found significant differences in emotional problems between groups, $F(1, 894) = 33.72, p = .000$. Tuckey's post-hoc test showed that majority boys reported significantly fewer emotional problems than the other groups. Mean scores of emotional problems were identical for minority girls 3.6 (SD = 2.4) and boys 3.6 (SD = 2.4), but they differed significantly for majority girls 3.0 (SD = 2.2) and boys 2.4 (SD = 2.1), $p < 0.01$. When comparing emotional problems within gender, the magnitude of the difference between minority and majority boys (eta square = .07) was more than 3 times the difference between minority and majority girls (eta square = .02). The results for majority boys and girls were similar to those in a large Norwegian study (no specific results for minority groups were reported [19]). Descriptives and intercorrelations are presented in Table 1. As Table 1 shows, emotional problems were correlated with the following characteristics: being a girl, being an ethnic minority, living in the capital, attending grade 6, not attending grade 7. No correlation was found for attending grade 5. The correlations between different grades and emotional problems were unexpected, since increasing age in preadolescence is associated with higher levels of emotional problems [1]. In addition, emotional problems were associated with economic hardship, school hassles, and home hassles.

Next, we proceeded to test a mediated moderation model [51] to test if the interaction effect of ethnic status and gender on emotional problems was mediated by hassles (see "Statistical Analyses" for details on the conditions that support a mediated moderation model). In order to examine whether school or home hassles could explain the low levels of emotional problems in majority boys, we tested a mediated moderation model with the covariates economic hardship (proxy for SES) and dummy variables for city and school grade (proxy for age), since we wanted to control for these factors. As shown in Table 1 economic hardship and city were correlated with emotional problems. We also controlled for school grade since we used it as a proxy for age, and since increasing age in late preadolescence/adolescence is correlated with emotional problems.

As Table 2 shows, school hassles was the only proposed mediator that met the first condition of the mediated moderation model (see 'Statistical analyses' in the

Table 2 Regression analyses: Effect of gender * ethnic status interaction on home and school hassles, controlling for covariates

Predictor	B	SE B	β	R ²
<i>DV = School Hassles</i>				
Step 1				
Economic hardship	1.05	.17	.20***	.05***
City	.15	.19	.03	
5 th grade	-.27	.20	-.05	
6 th grade	.18	.18	.04	
Step 2				
Gender	.17	.15	.04	.06*
Ethnic status	-.41	.17	-.09**	
Step 3				
Gender * ethnic status	-.86	.31	-.16***	.06***
<i>DV = Home Hassles</i>				
Step 1				
Economic hardship	2.32	.21	.35***	.13***
City	-.34	.23	-.05	
5 th grade	-.10	.24	-.02	
6 th grade	-.19	.22	-.03	
Step 2				
Gender	.57	.19	.10***	.14**
Ethnic status	.11	.20	.02	.29
Step 3				
Gender * ethnic status	-.39	.37	-.06	

Note: DV = dependent variable; B = unstandardized regression coefficient; SE B = standard error of the regression coefficient; β = standardized coefficients; R² = coefficient of determination.

* $p < .05$. ** $p < .01$. *** $p < .005$.

Methods section). In other words, the gender * ethnic status interaction significantly affected one of the hypothesized mediators, school hassles ($\beta = -.16, p < .005$), whereas there was no such effect on home hassles ($\beta = -.06, p = .29$). This meant that majority boys reported fewer school hassles but not home hassles than the other three gender/ethnic status subgroups. Perceived economic hardship was the only control variable that had a direct effect on school hassles ($\beta = .20, p < .005$). Belonging to the ethnic majority (i.e., ethnic status = 1) had a small direct negative effect on school hassles ($\beta = -.09, p < .05$), whereas no such direct effect was found for gender ($\beta = .04, p = .28$). Since only school hassles met the first condition of the mediated moderation model, home hassles were not included in further analyses.

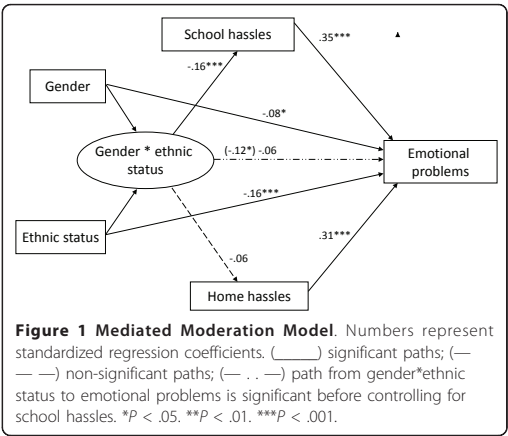
As Table 3 shows, the second condition was also met, as the interaction effect of gender * ethnic status on emotional problems was significant ($\beta = -.12, p < .05$; see Step 3a). The third condition was met, as school hassles had an effect on emotional problems after the effect of the gender * ethnic status interaction was controlled for ($\beta = .35, p < .005$; see Step 3b). The fourth and last condition

of the mediated moderation model was met as the effect of the gender * ethnic status interaction was substantially reduced after controlling for school hassles ($\beta = -.06, p = .29$, see Step 3b). The Sobel test [51] was used to statistically investigate the effect of the hypothesized mediator (i.e., school hassles) on the predictor-outcome (i.e., gender * ethnic status-emotional problems) relationship. Results of the Sobel test indicated that school hassles significantly mediated the influence of gender * ethnic status on emotional problems ($z = -2.70, p < .01$). Since all conditions were met, we concluded that the proposed mediated moderation model was supported. In other words, the above analyses suggest that the effect of the gender * ethnic status interaction in predicting emotional problems partially is mediated through school hassles (see Table 3). Figure 1 is a conceptual model that summarizes the central relationships in the mediated moderation model (control variables not included and note that school and home hassles were not entered simultaneously in the analyses.). Figure 1 shows that the effect of gender * ethnic status (the predictor) on emotional problems (the outcome) decreases from $\beta = -.12$ to $\beta = -.06$ when school hassles (the mediator) is included in the regression analysis. In other words, low emotional problems in majority boys (by dichotomization: gender = 1 * ethnic status = 1) are in part explained by low levels of school hassles. Alternatively, high emotional problems in the other three gender/ethnic status groups (among others minority boys, who according to their gender would be expected to show lower emotional problems) are, in part, explained by high levels of school hassles.

Table 3 Regression analysis: Testing the mediated moderation model

Predictor	B	SE B	β	R ²
Step 1				.05***
SES	.14	.03	.14***	
City	.15	.04	.13***	
5 th grade	.08	.04	.08*	
6 th grade	.11	.04	.11***	
Step 2				.08***
Gender	-.07	.03	-.08*	
Ethnic status	-.15	.03	-.16***	
Step 3a				.08*
Gender * ethnic status	-.60	.30	-.12*	
Mediator: School Hassles				
Step 3b				.20***
Gender * ethnic status	-.30	.28	-.06	
School hassles	.35	.03	.35***	

Note: DV = dependent variable; B = unstandardized regression coefficient; SE B = standard error of the regression coefficient; β = standardized coefficients; R² = coefficient of determination. * $p < .05$. ** $p < .01$. *** $p < .005$.



Discussion

In this study the gender gap in emotional problems was found in preadolescents with ethnic majority background, whereas differences were absent in minority preadolescents. Compared to normative levels of emotional problems in the Norwegian population [19], minority preadolescents in this study report higher scores. The difference was particularly salient among boys, although the effect size was small and clinically insignificant. We also found that school hassles, but not home hassles, accounted for the combined gender and ethnic status differences found in the sample. This means that low levels of school hassles among majority boys in part accounted for their low levels of emotional problems, as compared to the three other gender/ethnic status groups.

For majority children, the results replicate previous findings indicating a gender gap in emotional problems in adolescence (sometimes already during preadolescence, as in this study). However, this finding was not supported in minority preadolescents. That is, no gender differences in emotional problems were found for minority preadolescents. The explanatory effect of minority background on emotional symptoms was only 3%, which is small but significant (See standardized regression coefficient of ethnic status, $\beta = -.16$ in Table 3 and square it for information about its contribution to emotional problems). For comparison purposes we may look at gender, which is considered an important variable in the investigation of emotional problems, yet it accounted for 1% of the variance (see Table 3). In comparison, school hassles explained 12% of the variance in emotional problems.

So what seems to support the larger gender gap in emotional problems in ethnic majority as compared to ethnic minority preadolescents? In our study, the subgroup that at first glance most distinguishes itself is majority boys,

who have the lowest scores for emotional problems. Furthermore, it seems that one of the “protective factors” for their emotional health is their low reports of school hassles. Alternatively, we could argue that it is not the majority boys that stand out as a group due to low levels of emotional problems but the minority boys for their relatively high levels in spite of their “protective” gender. As mentioned previously, emotional problem scores for majority boys and girls in our study are quite consistent with those in a large Norwegian epidemiologic study [19]. This consistency in the emotional problems of majority boys may indicate that the minority boys are the ones with levels of emotional problems above the expected. However, we should keep in mind that the gender gap may appear later in ethnic minority groups than it does in ethnic majority groups.

In line with findings from Kistner et al. [22], our results point to school-related hassles as potential mediators for minority boys’ emotional problems. Steele [52] suggested that members of disadvantaged groups, for whom negative stereotypes of low academic achievement are prominent, are likely to experience distress about confirming the negative stereotype. Applying Steele’s suggestion to this study, we could reason that ethnic minority boys may protect their self-esteem by reducing their identification with academic performance [22,53]. However, this strategy may increase emotional problems in the long run, as school hassles accumulate [52]. Nevertheless, it is important to stress the plausibility that different risk factors may be relevant for different ethnic minority groups. For instance, higher levels of emotional problems in boys with Pakistani and Tamil background in Norway may be due to different social circumstances. One hypothesis is that being different from the norm (either physically or culturally) may put preadolescent minority boys at a higher risk of developing emotional problems than what would otherwise be expected in boys. Alternatively, boys from specific minority groups may have different risk factors for developing emotional problems, such as parental expectations concerning academic performance.

A number of limitations apply to this study. All measures were self-report, so we cannot rule out the possibility that preadolescents reported high levels of school hassles because of high levels of emotional problems, and not the other way around, as suggested above. Moreover, this study is cross-sectional and cannot shed light on causality issues. Considering informant variability with measures such as emotional problems, the study would have been strengthened by multiple assessment methods. It is possible that there is gender and culturally related bias in reporting emotional problems. Moreover, the conclusions are generalizable only for emotional problems and not for clinically significant depression or anxiety.

An additional limitation of this study was that we were not able to analyze different ethnic groups within the minority population in Norway. Testing whether school hassles mediate the interaction between gender and ethnic status on emotional problems, while simultaneously controlling for city, economic hardship, and school grade attended, requires a large sample size to gain adequate statistical power. We were therefore unable to investigate distinct ethnic groups as originally planned. Thus, collapsed different groups of non-Western minorities. These groups are undoubtedly quite different, but they share several similarities, such as their status as ethnic minorities; most of them are physically salient, differing from the ethnic majority group. Additionally, their upbringing is more likely to stress collectivistic values than individualistic values (as predominantly endorsed by most ethnic Norwegians). Because the categorization of ethnic status groups was based on self-reported parental place of birth, there are two other main misclassification issues: Misclassification of minorities into the majority group and misclassification of majority into minority groups. The first group consists of preadolescents of parents born in Norway, but who have indigenous, religious or minority background and whose parents look different or/and hold different cultural values than those pertaining to the majority. The second group consists of preadolescents of parents born abroad by sojourners, that is, preadolescents of ethnic Norwegians who were born while parents were temporarily abroad or emigrated to another country. However, misclassification was minimized since we also had data on the birthplace of grandparents. In other words, the ethnic status distinction we applied lacked precision, although its use was reasonable, especially given previous findings suggesting that minorities and majorities differ in relation to the gender gap. Ideally, we would have national groups large enough for comparison, and this should be an ambition for future studies. When addressing the effect of ethnic background on emotional problems, additional factors to consider are the “ethnic ratio” of the neighborhood [54] or schools [55] where preadolescents live.

The study also lacks data on pubertal development and acculturation. Pubertal development is associated with gender differences in emotional problems, although it may be a better predictor of emotional problems than chronological age in majority than minority girls [56]. It could be that the ethnic minority groups in the sample reached puberty later than ethnic Norwegians. This would postpone the gender gap in ethnic minorities and could explain why we did not find the gender gap in minority preadolescents. Although interesting, data on pubertal development is not essential to this study since our focus was not on the timing of the gender gap across groups. In terms of acculturation, ethnic minorities who are fluent in

Norwegian language and competent in cultural codes (i.e., majority cultural competence) may have lower levels of emotional problems than those who are not as fluent or competent. However, whether majority cultural competence protects the mental health of minorities may depend on their environment. For instance, Dalhaug et al. [55] did not find a positive relationship between majority cultural competence and mental health in schools with a high density of minority adolescents. In the near absence of majority students, knowledge about majority culture and language may not have been crucial to the adolescents' well-being. Thus, where possible, both acculturation and pubertal development should be included in future studies.

This study also has strengths worth noting. It supports that gender differences are found in majority but not in minority preadolescents. Also, in our mediating moderator regression analyses, we were able to study whether differences in emotional problems across gender and ethnic status may be mediated through home and school hassles while simultaneously controlling for important covariates that could confound the associations in the model (economic hardship, school grade attended, and city). Many studies have samples in which these variables are grouped together, and they lose some important information by doing so. In addition, this study supports the role of school hassles as a potentially significant mediator for emotional problems. Future studies should examine the relationship between gender, ethnic background, and emotional problems longitudinally. If a causal link is suggested between school hassles and emotional problems, studies should further investigate what specific types of hassles are associated with these symptoms. The studies could have implications for understanding the mechanisms underlying emotional problems in preadolescence as well as for tailoring interventions to reduce symptoms. Based on our findings, we would particularly suggest that school-related hassles be included in further investigations.

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Authors' contributions

DEA participated in data collection, conducted literature search and data analyses, and drafted the article. ER made a substantial contribution to the methodology and the interpretation of results and helped draft the manuscript. BO is PI of the YCC project from which data from this study is drawn and helped draft the manuscript. HDZ made a substantial contribution to the design and methodology of the study and the

interpretation of results and helped draft the manuscript. All authors read and approved the final manuscript.

Competing interests

The authors declare that they have no competing interests.

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Paper II

Paper III

Risk of Emotional Distress is Higher in Preadolescents with Immigrant Compared to Non-Immigrant Background

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Abstract

Background: The question of whether immigrants have more emotional problems than non-immigrant peers has yielded mixed results. In Norway, there has been a tendency towards immigrant youth reporting higher rates of emotional problems. In addition to studying levels of emotional problems across immigrant background there is a need to investigate whether the phenomenology of these problems is comparable across ethnic groups.

Objectives: To use latent class analysis (LCA) to identify subgroups of preadolescents with distinct types of emotional problems in a multiethnic sample in Norway, and to investigate associations with immigrant status, after controlling for other demographic and risk factors related to emotional problems.

Methods: Preadolescents aged 10 to 12 years ($n = 1,042$) completed a questionnaire assessing emotional problems and sociodemographic factors including gender, grade level, city, economic hardship, school hassles, and parental achievement values. LCA was used to identify subgroups of preadolescent emotional problems. Multinomial logistic regressions (MLR) were conducted in order to assess the relationships between the classes and immigrant background with four immigrant groups from: all backgrounds, Pakistan, Turkey, and Sri Lanka. The reference group was the ethnic Norwegians.

Results: LCA identified three classes according to the severity of problems labeled: Healthy, Borderline and Distressed. MLR analyses found immigrant background compared to non-immigrant background to increase the odds of belonging to the Distressed class by an approximate factor of 2, depending on the immigrant group. Consistently, this finding held after controlling for risk factors.

Conclusions: These findings suggest that, already in preadolescence, immigrant background may significantly increase the odds of belonging to a subgroup characterized by emotional distress (compared to belonging to a healthy class). Also, findings suggest similarity across ethnic background in the expression of emotional problems during preadolescence. This is the first study to identify classes of emotional problems among specific immigrant groups of preadolescents.

Keywords: internalizing symptoms, ethnic minority, latent class, gender.

Background

Configurations of Emotional Symptoms Across Ethnic Groups

Emotional problems can be expressed differently across cultures. It is well known that some types of diagnoses and symptom configurations are seemingly more abundant in specific ethnocultural groups (1, 2). An example is «nerve attack», referred as «ataque de nervios» in Spanish, which is found in Spanish/Hispanic communities, but not in others (2). While studies investigating group variation in the factor structure of mental health screening instruments are increasing (e.g. (3)), only a few studies have investigated whether certain ethnic groups are more likely to suffer from specific configurations of emotional symptoms (including related disorders such as depression, anxiety and somatization) (4-6). In spite of this research gap, understanding which symptoms characterize depressive distress in different cultural groups can aid diagnosis and identifying risk and protective factors related to endorsing specific symptom configurations.

Configurations can be studied by identifying distinct subgroups of people with characteristic patterns of emotional symptoms. For instance, Carragher and colleagues (4) found four subgroups based on reported depression in a nationally representative adult population in the US: severely depressed, psychosomatic, cognitive-emotional and non-depressed. Hispanics were significantly less likely to report psychosomatic symptoms relative to White counterparts, and Native Americans had a decreased risk of reporting depressive symptomatology. These findings were interpreted as a support for a healthy effect on ethnic minorities, who report lower levels of psychiatric disorders, despite more social adversity (4). Studies to understand associations between immigrant background and emotional problems in children and adolescents have reported inconsistent findings (7). For example, adolescents from minority groups whose physical appearance generally differs from that of the dominant ethnic majority seem to be more vulnerable for emotional problems in some studies (8-10), and not others (11-13). However, findings vary according to other factors such as the ethnic minority group being studied, the country in which they live, and their age range (7). The reasons why immigrant background may be related to more emotional problems have been attributed to minority-related stigma (14, 15), characteristics of the family (low SES, strong collectivistic values, more acculturative stress) (7), war-background

(12, 16) as well as characteristics of the majority society (social education, integration policies and discrimination) (17, 18).

In research on the mental health of children and adolescents, studies investigating different configurations of emotional or underlying symptoms and diagnoses (including anxiety, mood, and somatoform disorders) are rare. Compared to adults, comorbidity of emotional problems is higher in children and adolescents, both within emotional problems, as well as between these and behavioral problems (19). The literature provides one study that identified different configurations of *combined* emotional and behavior symptoms, and risk factors (20), but no studies were found on identifying subgroup configurations of isolated emotional symptoms (or underlying symptoms or diagnoses) in a multi-ethnic young population. Subgroup-specific configurations of emotional problems should however be investigated because they may be associated with potential risk and protective factors, and could inform whether specific ethnic groups are overrepresented in any type of configuration.

Different Ethnic Groups of Preadolescents in Norway

While the size of indigenous minority groups has been quite stable across the last 40 years in Norway, the size of immigrant minority groups has increased markedly during this period (21). Today, the largest groups among children of immigrants, are from Pakistan (13%), Somalia (8%) and Vietnam (7%) (21). There has been particular concern for the mental health of “non-Western immigrant” students (22, 23). These preadolescents are more likely to live in poorer neighborhoods, and to attend schools that are more socioeconomically disadvantaged, to achieve lower grades in national exams (24), and, for minority boys, to drop out of high-school (25). In contrast, immigrant girls appear to be more likely to finish high-school than ethnic Norwegian peers (26).

Even though the evidence on emotional distress in immigrant adolescents in Norway is mixed, most studies suggest that immigrant youth are more likely to report higher levels of emotional problems than ethnic Norwegian peers, although the magnitude of the difference in some studies is small (27). Other studies have stressed the difference in levels of emotional problems across ethnic minority groups (11, 28, 29). In a large-scale comparative study involving immigrant and non-immigrant youth in 13 countries, immigrant youth in Norway scored around the grand mean for the total international sample, and lower than the ethnic Norwegian reference sample (17). Still other investigators have focused on possible contextual factors in different societies such as Norway and Sweden, which may have a

different effect on emotional problems in immigrants from the same national background (18). The included studies have used mean symptom scores to assess the level of mental health problems which may potentially hide variation in the structuring of symptoms. Identifying different configurations of emotional problem symptoms across different ethnic groups of youth in Norway may provide additional informations about the heterogeneity of emotional problems in this group.

Theory-Driven Versus Data-Driven Configurations of Emotional Problems

The common approach to studying configurations of emotional problems is theory-driven. According to the theory, the types of symptoms and configurations of emotional problems (including subtypes and underdiagnoses) are already established before data analysis takes place. For instance, a researcher studying mood disorders, may wish to identify whether a specific ethnic group is more likely to endorse unipolar versus bipolar disorder. However, the “subgroups” (for example, “anxious”, “depressed” and “somatizing”) are established *a priori*, beforehand, in this case (30).

By contrast, Latent class analysis (LCA) is a data-driven approach in which configurations of emotional problems emerge from the available data. LCA identifies subgroups of people (also known as «classes») that distinguish themselves in terms of symptom combinations (also called “configurations”), as well as subgroup-specific risk and protective factors. In young populations there is also the tendency to analyze emotional problems as one homogeneous phenomenon. LCA allows researchers to test this one-phenomenon assumption by allowing emotional symptoms to cluster into subgroups according to patterns of associations among variables that evolve from the sample (30).

In adults, all LCA-studies where the authors have identified emotional problems (including subcategories), have found classes that are, to some degree, based on the severity of emotional problems (such as a “low levels of symptoms”-class) (4-6, 31). In addition, some LCA-studies on adults also find classes based on the type of emotional problems (4, 6, 31). For example, Copeland and colleagues (2009) found 5 subgroups with distinct configurations of common childhood psychosocial risks: 2 were low-risk (*No risk class* and *Interparental problems class*), 2 were moderate-risk subgroups (*Single parent/ Poor/ Crime class*, *Uneducated/ Poor class*, *Step-parent/ Crime class*), and 1 was high-risk. High risk youth had the highest levels of both emotional and behavioral disorders (31).

When focusing on immigrant-specific configurations of emotional problems, it is useful to include other variables that may confound the relationship between the emotional symptom-classes and immigrant groups. Some of the demographic factors associated with emotional problems are gender (7, 32), age (7, 33), socioeconomic status (34, 35) and rural/urban setting (36). As such it was found that girls are more likely to report emotional problems, at least from puberty and on (37). Age is another implicated factor, as emotional problems increase from childhood to adolescence (33). Many studies have shown that children living in rural settings have lower levels of emotional problems than those living in urban areas (14). Moreover, given the importance of school hassles (8, 38-40) and parental achievement values for emotional problems in previous studies (41-43) we chose to also include them in this study. The school is a major arena in the lives of children and adolescents, and some researchers point to minority parents as highly invested in the school as a place for social mobility for their offspring in the majority society (41, 44, 45). Parental achievement values have been associated with positive consequences for emotional health in some studies (46-48), and negative in others (41, 44, 45).

It is important to know more about classes or configurations of emotional problems in young people, especially in immigrant groups in which mental health problems may be considered as even more taboo than in the majority population. Still, emotional problems are also related to stigma in Western countries, and their lack of disruptiveness towards others (as opposed to behavioral problems) may contribute to a greater difficulty in identifying these problems in daily life, and prolong suffering for those affected.

Thus, this study investigates two questions: (1) which types of classes of emotional problems, emerge from a multiethnic preadolescent sample in Norway (2) is immigrant background (specific immigrant groups and in general) more likely to be represented in certain classes than in others?

Methods

Data Collection and Sample

Data was provided by the “Youth Culture and Competence” (YCC) study undertaken by the Norwegian Institute of Public Health, and approved by the Regional Committee for Medical Research Ethics (REC). During 2006 and 2007 the YCC invited preadolescents in the age range of 10 to 12 years from 14 schools in Oslo and Bergen to participate in the first wave of the study. While the proportion of immigrants in Bergen is 11% and the same as the national average, 27% of the population in Oslo is immigrant; i.e. foreign-born, or Norwegian-born with two foreign-born parents. Immigrants are from more than 200 mostly Non-Western countries (21). While there are few ethnic enclaves in Norway, immigrants tend to settle together in areas where housing prices are reasonable. Schools in these areas were targeted in the initial stage of recruitment. In addition, children with Tamil (from Sri Lanka) and Turkish origin from other schools were recruited through collaboration with immigrant non-governmental organizations.

Parents were informed of the YCC through the preadolescents’ school, or non-governmental immigrant organization, and asked to provide written informed consent if their preadolescent was to participate in the study, in accordance with REC guidelines (see <https://helseforskning.etikkom.no>).

The YCC questionnaire was completed by the preadolescents in their respective classrooms during two class hours. For those recruited through non-governmental immigrant organizations, the questionnaire completion was done after school hours. Research assistants were available if needed during data collection. Of the children invited, 1,042 preadolescents attending grades 5th to 7th (10-12 years old) participated in the YCC, yielding a participation rate of 65%. Participants with two foreign-born parents, and at least 3 grandparents born abroad, were classified as being of immigrant background (also referred to as minority from now on). Similarly, participants with two Norwegian-born parents, and at least 3 Norwegian-born grandparents, were classified as ethnic Norwegians (also referred to as majority from now on).

Except from those belonging to the categories “ethnic Norwegian” and “ethnic minority”, all other preadolescents were excluded from further analyses (see (30) for a more detailed account of the categorization process). This yielded a sample of 902 preadolescents who were evenly divided across age and gender. Forty seven percent of the sample had

immigrant background, meaning that minorities were overrepresented in line with the recruitment strategy of the YCC. The largest minority groups were from Pakistan (14%), followed by Turkey (5%), and Sri Lanka (5%). Of those recruited through cultural centers, 18 preadolescents with Turkish background (40% of the Turkish sample) and 4 with Tamil background (9% of the Tamil sample) completed the questionnaire.

Measures

Emotional problems were measured by the self-report questionnaire of the emotional symptoms scale of the Strengths and Difficulties Questionnaire, Norwegian version (SDQ-S; see www.sdqinfo.com) (49). The emotional symptoms scale consists of five items indicating symptoms of somatization, anxiety and depression. The items are: “I get a lot of headaches, stomach-aches or sickness”, “I worry a lot”, “I am often unhappy, depressed or tearful”, “I am nervous in new situations. I easily lose confidence”, and “I have many fears. I am easily scared” ($\alpha = 0.68$). Although, a sum score ranging from 0 to 10 is typically computed (49), each item was kept separately in analyses in order to identify how the different symptoms cluster.

Gender (boys = 0, girls = 1), city (Bergen = 0, Oslo = 1) and ethnic status/background (majority group = 0, immigrant/specific immigrant group = 1,) were dichotomized. The 3 possible grade levels (5th, 6th and 7th grades) which we included in the analyses due to their being a proxy of age, were used as dummy variables. The dummy variables were coded as follows: school grade 5 (0 = 6th and 7th grades, 1 = 5th grade), school grade 6 (0 = 5th and 7th grades, 1 = 6th grade), school grade 7 (0 = 5th and 6th grades, 1 = 7th grade).

School hassles were measured by five items from the General Everyday Hassles scale (8, 39). The preadolescents checked how often during the last year they had experienced: “I am afraid of not doing well enough at school”, “Big problems in understanding the teacher when he/she is teaching”, “Strong pressure from people around me to succeed and do well at school”, “Problems with one or more teachers”, “Arguments or problems with other students in my class” ($\alpha = .57$). Each question was rated on a scale ranging from 0 (“no, never”) to 3 (“yes, very often”), and the sum of the rated scores were computed.

Economic hardship was used as a proxy for socioeconomic status, and was measured with four items from the scale “Adolescent Perceptions of Family Hardship” (50). The items were: “How often do your parents argue with each other about not having enough money?”, “How often do you argue with your parents about not having enough money?”, “How much

of a problem does your family have because your parents do not have enough money to buy things your family needs or wants?”, and “How upset or worried are your parents because they do not have enough money?” ($\alpha = .65$). The first two items were rated on a scale ranging from 1 (“never”) to 5 (“always”), while the latter two items were rated on a scale ranging from 1 (“never”) to 4 (“very much”). All four economic hardship-items were standardized and a mean score was computed. The unstandardized scale consisting of the first two items was used when reporting mean differences ($\alpha = .48$), otherwise the standardized scale was used.

The scale *parental achievement values* measured how preadolescents perceived parental emphasis on achievement, and was extracted from the Parental Pressure Questionnaire (51). Four items were rated on the Likert scale ranging from 1 (“never”) to 5 (“always”) ($\alpha = 0.70$). The questions were: “My parents carefully monitor what I do in school”, “My parents think that doing well in school is very important”, “My parents say that I should work hard at everything I do”, and “My parents often ask me about schoolwork”. Parental achievement values were included because there has been indicated that immigrant parents may emphasize their children’s academic success more than non-immigrant parents (24, 42, 44). This emphasis may, in turn, increase preadolescents’ pressure to achieve academically, and contribute to emotional problems.

Analytic Strategy

Latent class analysis was conducted to empirically identify subgroups or “classes” in the sample. In this way, each class shared a similar response pattern or “configuration” of emotional problems. Also described as a categorical variant of factor analysis, LCA assumes that observed variables (i.e., how participants responded to the *Emotional Problems Scale*) are indicators of an unobserved, latent variable. The basic premise of LCA is that within classes the symptoms are “locally independent”. This means that the specific clusters of depressive, anxious or somatic symptoms can be explained by an underlying classification of preadolescents into subgroups with similar patterns of symptoms. Therefore, the objective when using LCA is to identify the smallest number of subgroups or configurations of emotional problems in the sample that describes the association between the items in the scale, or the five emotional symptoms of the SDQ in this study’s case.

Although comprising heterogeneous characteristics, emotional problems are frequently studied as a single scale, thus potentially occluding information about which specific subtypes

of emotional problems characterize certain groups and not others. In this study, LCA is utilized to identify data-driven risk subtypes that describe how demographic and risk variables are associated with emotional problems in specific subgroups within a multiethnic sample of preadolescents (10-12 year olds) in Norway. To estimate the number of classes that best fit the data, an unconditional model with the full sample was used. Each emotional symptom indicator was included separately in the model in order to maintain as much information as possible regarding heterogeneity. This allowed us to investigate whether certain subgroups of preadolescents were more likely to display distinct patterns of emotional problems than others. Covariates were not used to inform class enumeration because research suggests this can lead to an over-extraction of classes (30).

The LCA was accomplished using Mplus version 5, a statistical modelling program which can accommodate complex design methodology (52). Models with 1 through 4 classes were estimated to determine the optimal number of classes that best fit the data. With LCA, there are multiple statistical indicators of model fit. The choice of best fitting model is achieved through a combination of statistical considerations, data and theory. Both the bootstrapped parametric likelihood ratio test and the Lo-Mendell-Rubin likelihood ratio test (LMR-LRT) assess the improvement in fit between competing models. A non-significant value ($p > .05$) suggests that the model with one class less provides a better fit to the data. The BIC and the sample-size adjusted BIC (SSABIC) are goodness of fit measures across competing models: the lowest value on each criterion indicates the best fitting model. In this analysis, we chose the BIC and the LMR-LRT tests as our main indicators since they have been evaluated as the most reliable indicators in determining the number of latent classes (53). Finally, the best number of classes in terms of statistical fit indicators was assessed in terms of theoretical soundness.

The second part of the analyses consisted in examining how immigrant background (both generally, for all immigrants, and for the three largest specific immigrant groups in the sample) predicted membership in the different classes. We also assessed whether gender, city, grade level, school hassles, economic hardship and parental achievement values could distinguish between specific class memberships. For this purpose we used the latent class variable obtained in Mplus to conduct a *multinomial logistic regression* (MLR) with PASW Statistics 18, Release Version 18.0.0 (54). We conducted separate MLRs for each immigrant groups: All immigrants, Pakistani background, Turkish background, and Sri Lankan background. Ethnic Norwegians were the reference group of all four immigrant groups, and results were reported as Odds Ratios (OR) with 95 percent Confidence Intervals (CI).

Missing Data

The Mplus software uses a full information maximum likelihood estimation, which is a widely accepted way of handling missing data (55, 56). The covariance coverage for all variables ranged from 97.2% to 99.1%, well above minimum thresholds for establishing adequate coverage (53). Four subjects were excluded from the analyses since their answers were missing in all indicators. Missing value analysis and an expectation-maximization algorithm were used to impute missing values for covariates using PASW Statistics 18 (54).

Results

An overview of the sample is presented in Tables 1 and 2. Table 1 presents frequencies of categorical variables and Table 2 presents mean values of continuous variables for immigrant and non-immigrant preadolescents.

----- Table 1 -----
----- Table 2 -----

Latent Class Analysis of Emotional Symptoms

The solutions with latent classes 1 to 4 were estimated and evaluated for fit indices shown in Table 3. The solution with 3 latent classes had the best fit since it yielded the lowest BIC, SSABIC, AIC and Log likelihood values, while simultaneously maintaining significant LMR-LRT and bootstrapped parameter likelihood values. Moreover, the 3-class solution was theoretically sound as the classes clearly indicated symptom severity. The classes were accordingly denominated: “Healthy”, “Borderline” and “Distressed”.

----- Table 3 -----

Although the entropy (0.62) of the 3-class solution was modest, the average diagonal values between the fitted classes and class-assignments suggest that the classifications of the Healthy (0.87) and Distressed (0.90) classes were good (52). This means that those assigned to the Healthy and Distressed classes had a respective probability of 87% and 90% of actually belonging to their assigned classes. As for the Borderline class, the probability of correct classification assignment was lower (73%) than the two other classes.

Characteristics of the Classes

Figure 1 shows the prevalence and characteristics of the identified classes.

----- Figure 1 -----

The Healthy class comprised a group of children with few emotional problems and represented 47% of the sample. These preadolescents had the lowest probabilities for fully endorsing somatic complaints or worries (both 7%), and for feeling unhappy (1%). The Borderline class represented 33% of the total sample and whose response pattern was characterized of a partial endorsement of emotional symptoms. This class had moderate

probabilities of falling into the bottom quartile for emotional symptoms, ranging from a probability of 44% of being afraid to 18% for being clingy. On a general basis however, the Borderline class had low probabilities of fully endorsing emotional symptoms ranging from 12% for somatic symptoms to 0% for being clingy.

The Distressed class represented 20% of the total sample and had the highest probabilities for falling into the top quartile on all emotional symptoms, ranging from a probability of 55% for being worried or clingy to 29% for feeling unhappy. In light of these results, the main distinction of these classes was the *severity* rather than the *type* of emotional problem (i.e., depression versus anxiety. Since the contrast between the Distressed and the Healthy subgroup is both clinically relevant and statistically robust (due to lower probability of correct class assignment in the Borderline subgroup), the next section focuses on the comparison between the Distressed and Healthy subgroups.

Predictors Associated with Each Class

Table 4 presents the odd ratios estimates (OR) and confidence intervals (CI) for class membership in relation to predictors as derived with latent class multinomial logistic regression models. The OR indicates the estimated odds for belonging to the Distressed class relative to the Healthy class (the reference class).

----- Table 4 -----

When collapsing such a heterogeneous population as “immigrants” into one group, the question of whether findings are representative across immigrant groups arises. Accordingly, findings were tested across the three largest national groups in the sample: those with background from Pakistan, Turkey and Sri Lanka, while ethnic Norwegians were kept as the reference group. As seen in Table 2, analyses of specific minority groups are coherent in terms of OR-sizes and statistical significance of values with findings concerning immigrant groups in general, with two exceptions. These exceptions are grade level and economic hardship which are only significant in the collapsed immigrant group. The reason seems to be low sample size in the separate immigrant groups. Apart from these exceptions, immigrant group specific-findings support the results.

The effect of immigrant background in accounting for membership in the Distressed compared to the Healthy class remained quite stable in the unadjusted (without adjusting for other factors) odds ratios (see Figure 2). The adjusted odds ratios for ethnic background on Distressed latent class-membership are those presented in Table 3, adjusted for gender, grade

level, economic hardship, school hassles, city and parental achievement values. The significance of odds ratios was calculated “vertically” in Table 3, in four vertical adjusted models (all immigrants, Pakistan, Turkey, and Sri Lanka).

----- Figure 2 -----

Briefly, the main findings were: (1) the minority preadolescents are about twice as likely as ethnic Norwegians to belong to the distressed class compared to the healthy class, and (2) school hassles increase the odds of belonging to the Distressed subgroup by about 2.5 times. (3) Notice that these results were robust across three immigrant groups in the sample: those from Pakistan, Turkey and Sri Lanka.

Discussion

The first aim reached in this work was the identification of three latent classes of emotional problems by applying latent class analysis in a preadolescent multi-ethnic sample in Norway. These classes were labeled as Healthy, Borderline, and Distressed. The classes were characterized by levels (instead of type) of symptoms. The second aim attained was that the odds of belonging to the Distressed versus the Healthy class, were about twice as high for preadolescents with immigrant background. This was observed both in general as well as among the three largest specific immigrant groups in the sample. This finding controlled for demographic variables such as gender, age, socioeconomic status or economic hardship, and school-related variables such as parental achievement values and school hassles.

The findings imply that there are primarily quantitative rather than qualitative differences in emotional problems, at least when measured by the Emotional Problems Scale of the SDQ in preadolescents. The finding of latent classes differing in degree of severity is a way of suggesting that the expression of emotional problems may be similar across ethnic status. It is possible that there would be different latent classes with an older sample, as emotional problems tend to differentiate in adolescence and adulthood (from emotional problems into more specific depression or anxiety). Hence, this is a relevant question to investigate in future studies.

The effects of school hassles and economic hardship appear to be rather consistent (in terms of odds ratios) across immigrant groups. This suggests that children of immigrants, probably non-Western immigrants in particular, may be prone to similar risks for emotional problems. The causes of these risks are unknown at this stage, although they may be associated with lower socio-economic status, physical salience from the majority phenotype predisposing for discrimination, larger strain on the family due to reduced social network, lower parental understanding of resources available in the society and to guide their children into the majority institutional system, including schools (7, 27). Factors involved in these risks are important questions for further studies.

Further, the findings suggest that during preadolescence, ethnic immigrant minorities of distinct non-Western background are about twice as likely to be among the most emotionally distressed preadolescents. This finding may have important implications as emotional problems are silent, non-disruptive, and likely to go unnoticed by teachers and parents (57). Even when parents and teachers do notice emotional problems, teachers may

underreport these problems in minority children as compared to majority children (58). Additionally, in low SES traditional non-Western groups there are high levels of stigma concerning mental health issues (59, 60). Therefore, the relatively low likelihood of preadolescents with emotional problems getting help, which is even lower among children of immigrants, calls for special attention from teachers, parents and other health workers who are in contact with preadolescents in Norway.

This study provides a relevant contribution to the research on immigrant mental health in Scandinavia, but it has some limitations. Firstly, the outcome of emotional problems and risk factors in terms of school hassles and parental achievement values, were measured at the same time. This causes uncertainty to whether risk factors in fact temporally preceded emotional problems. The heightened odds of children of immigrants belonging to the Distressed class, may be due to unknown factors that were not accounted for in the present study. Secondly, this study relies only on self-reports from preadolescents, while other sources, such as parents and teachers could have provided additional information about the latent classes of emotional problems among preadolescents. Thirdly, it is uncertain to state that the same phenomenon is underlying the emotional symptoms reported by both children of immigrants and non-immigrants. Children of immigrants may simply report more extreme values, without the implication that these values reflect more severe problems. Fourthly, the sample is not fully representative of the population, neither in the national nor in the municipal levels. Samples of 43 (the size of the immigrant sample from Sri Lanka in this study) individuals are small, implying the need of caution before extrapolating evaluations based on the sample. Furthermore, these immigrant populations are not ethnically homogeneous. For instance, the Turk population in Norway consists of a Kurd ethnic minority. These examples support the need for more knowledge about emotional health in these groups, for which this study serves as a foundation and contribution.

Aside from the limitations, this study has noteworthy strengths. Young immigrants are rare in latent class-studies of emotional problems, if represented at all. In contrast, this study employed a sample consisting of 47% with immigrant background. Even though the size of some immigrant groups was too small to examine separately, findings for the three largest immigrant groups in the sample were possible. It is important that mental health research includes a diversity of persons, including immigrants, who represent a substantial and growing segment of the country's population. Researchers studying minorities face additional challenges compared to peers who do not study a specific population. These include recruitment issues such as translation fees, persuading immigrant parents of the importance

and voluntary nature of participating in mental health surveys, as well the ethical concerns related to potentially stigmatizing findings. These challenges certainly add difficulty to attaining knowledge about the mental health of immigrants, but surely do not alter the importance of including these groups in mental health research. In spite of the sole reliance on self-reports being a limitation, self-reports appear to be the best option in attaining information on preadolescents' emotional problems, given that there is only one option of source (either teacher -, parent -, or self-report from the preadolescent).

Even though it may be questioned whether the findings from the study are nationally representative, they do suggest that non-Western immigrant preadolescents in multi-ethnic urban neighborhoods in Norway have higher odds of being emotionally distressed. In addition, these findings are supported by studies on adolescents in Norway (27), although there are some exceptions (13, 61). The participation rate appears to have been higher for ethnic majority in this study, indicating that higher participation rate by immigrants could possibly inflate their emotional problem scores. This is because non-participation tends to be more common among the most distressed participants, who have a higher likelihood of not attending school during data collection nor delivering consent forms to parents and teachers (62). The ethnic Norwegian preadolescents from multi-ethnic neighborhoods who participated in the study could have lower SES as compared to representative studies. If this is the case, the odds of children of immigrants belonging to an emotionally distressed class could probably be even higher if the sample was nationally or municipally representative, than in this study, since the Norwegian reference group would probably report even lower symptoms.

When comparing the magnitude of immigrant and non-immigrant odd ratios for belonging to the Distressed class, as compared to the Healthy class, the clinical relevance of this study is substantial. However, there should be noted that there is substantial variability in the non-Western immigrant sample, since the odds ratios of emotional symptoms in the total immigrant group is lower than the odds ratios of the three specific immigrant groups. This indicates that, in the adjusted model, the three specific groups are among the most emotionally distressed immigrant groups in the sample. In the unadjusted model, odds ratios for the total immigrant group seem to reflect the fluctuations in odds ratios of the three specific immigrant groups (see Figure 2). In addition, this study's findings indicate that the silent burden of emotional problems may already be more prominent in preadolescence among immigrants and their children, than among non-immigrants in urban multi-ethnic schools. The present results and analysis lead us to suggest that future studies should be made to investigate possible mechanisms implicated in this overrepresentation of children of

immigrants among the emotionally distressed. Meanwhile, parents, teachers and others who work with preadolescents should be involved in formulating hypotheses about possible mechanisms to why preadolescents in Norway, with as different immigrant background as Pakistan, Turkey and Sri Lanka, appear to have such a similar profile of emotional problems and related risk factors. Also, parents, teachers, and health workers who routinely interact with preadolescents, should remain attentive in order to recognize and advocate in favor of those who suffer from this silent burden.

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Table 1. Distribution of categorical variables included in the analyses (N = 898).

Factor	Categories	Frequency	%
Gender	Boys	451	50.2
	Girls	447	49.8
Ethnic status	Immigrant	425	47.3
	Non-immigrant	473	52.7
National background	Norway	474	52.7
	Pakistan	129	14.4
	Turkey	45	5.0
	Sri Lanka	43	4.9
	Other (37 countries)	198	22.9
Grade level (appr. age)	5 th grade (10 years)	269	30.0
	6 th grade (11 years)	336	37.4
	7 th grade (12 years)	293	32.6
City	Oslo	713	79.4
	Bergen	185	20.6
Location of data collection	Class room	876	97.6
	Ethnic center	22	2.4
Immigrant generation	1 st generation	132	14.7
	2 nd generation	766	85.3
Latent classes	Healthy	423	47.1
	Borderline	298	33.2
	Distressed	177	19.7

Non-immigrant and Ethnic Norwegian groups are identical.

Table 2. Mean scores, standard deviations and effect size of mean group differences.

Variable	Immigrant background mean (SD)	Ethnic majority mean (SD)	Partial eta squared
Somatic	.69 (.73)**	.55 (.71)	.01
Worries	.91 (.76)***	.63 (.71)	.03
Unhappy	.50 (.66)*	.39 (.62)	.01
Clingy	.87 (.72)**	.72 (.65)	.01
Afraid	.61 (.73)***	.42 (.62)	.02
School hassles	1.63 (.51) *	1.55 (.45)	.01
Parental achievement values	4.40 (.65) ***	3.96 (.68)	.10
Economic hardship	1.21 (.41)	1.29 (.49)	.001

The five emotional problems symptoms are listed first in the table. Among all listed variables, only economic hardship showed no significant group difference. Partial eta squared is the proportion of the variance in variables that is explained by immigrant background (compared to ethnic majority background). * $p < .01$; *** $p < .001$.

Table 3. Model fit indices for 1 to 4 class solutions of emotional symptoms.
($N = 889$ preadolescents)

Model	Loglike- lihood	BIC/ SSABIC	AIC	Entropy	Lo-Mendell- Rubin Likelihood	Bootstraped parameter likelihood
1 class	-4255	8578/ 8546	8530	-	-	-
2 classes	-3991	8125/ 8058	8024	0.67	0.000	0.00
3 classes	-3942	8102/8000	7948	0.62	0.004	0.00
4 classes	-3928	8149/ 8013	7942	0.66	0.110	0.07

Bold typing indicates best fit, and shows that the solution with 3 latent classes had best fit.

Table 4. Odd ratios and confidence intervals for predictors comparing the Distressed and Healthy subgroups, controlled for risk factors.

Distressed versus healthy subgroup	Groups			
	All immigrants (vs. ethnic Norwegians) R2 = 0.16	Pakistani background (vs. ethnic Norwegians) R2 = 0.19	Turkish background (vs. ethnic Norwegians) R2 = 0.16	Sri Lankan background (vs. ethnic Norwegians) R2 = 0.18
Immigrant group (vs. ethnic Norwegian)	1.82** (1.18-2.81)	2.26* (1.18-4.34)	2.62* (1.02-6.68)	3.19* (1.25-8.15)
Girls (vs. boys)	2.22*** (1.49-3.31)	2.36*** (1.41-3.97)	2.68*** (1.53-4.70)	2.50** (1.42-4.38)
School hassles	2.54*** (2.07-3.13)	3.06*** (2.33-4.01)	2.51*** (1.90-3.33)	2.93*** (2.19-3.93)
5 th and 6 th grades (vs. 7 th grade)	1.74* (1.05-2.88)	1.50 (0.79-2.83)	1.37 (0.69-2.70)	1.65 (0.81-3.34)
Economic hardship	1.25* (1.03-1.52)	1.20 (0.94-1.53)	1.18 (0.92-1.51)	1.18 (0.92-1.51)

Predictors implicated in distinguishing between the Distressed and Healthy classes are similar in the three largest immigrant groups. City, parental achievement values and the other dummy variables for grade level (5th and 7th grades) did not reach significance in any of the immigrant group comparisons, and were excluded from the table. Significance was tested within groups (vertically) *p < 0.05, **p < 0.01, ***p < 0.001.

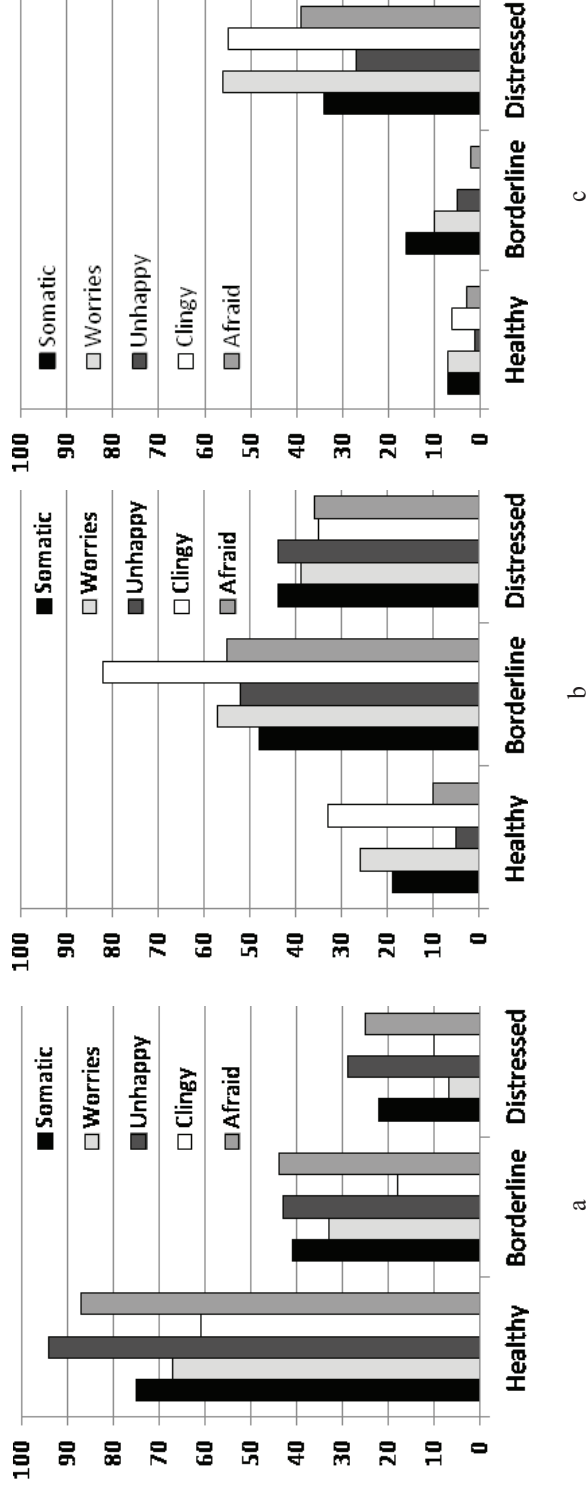


Figure 1. Class probability of endorsing each of the three alternatives ("not true"/ "partly true"/ "not true at all") to each of the five emotional symptoms: a - probability of symptom absence, b - probability of some symptom presence, c - probability of strong symptom presence.

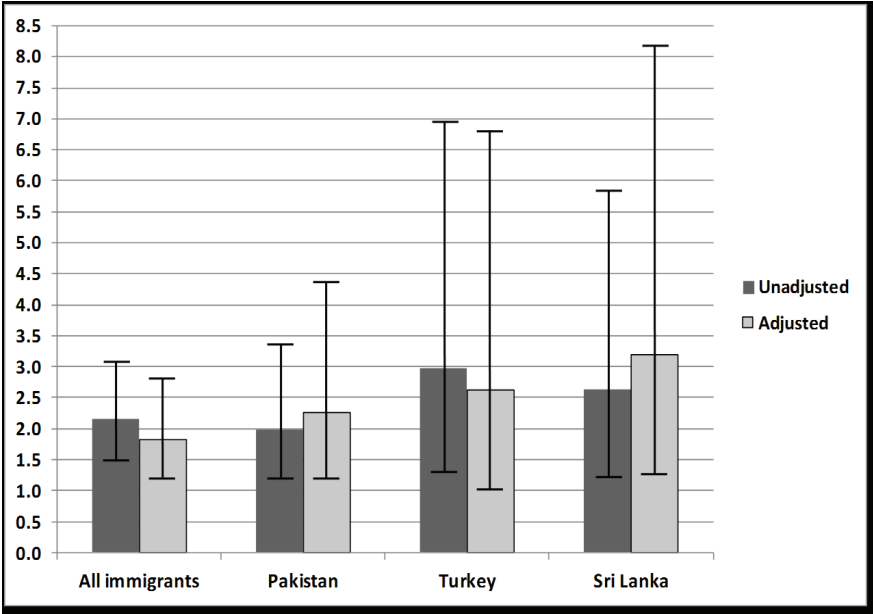


Figure 2. Odd ratios and confidence intervals for membership in the Distressed class, compared to the Healthy class, for different immigrant groups.

YCC Questionnaire

Appendix



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Spørreskjema barn og ungdom

Tildelt nummer:

Tildelt nummer settes her

Dato

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FØRST VIL VI GJERNE VITE LITT OM DEG OG BAKGRUNNEN DIN

1. **Kjønn (sett kryss):** 1 ☐ Gutt 2 ☐ Jente

2. **Hvilket land er du født i?**

1 Norge ☐ 2 Annet land ☐ 3 Hvilket? _____

Hvilket land er foreldrene dine født i?

3. **Mor** 1 Norge ☐ 2 Annet land ☐ 3 Hvilket? _____

4. **Far** 1 Norge ☐ 2 Annet land ☐ 3 Hvilket? _____

+



Hvilket land kommer besteforeldrene dine fra?

5. **Farmor** 1 Norge ☐ 2 Annet land ☐ 3 Vet ikke ☐
6. **Farfar** 1 Norge ☐ 2 Annet land ☐ 3 Vet ikke ☐
7. **Mormor** 1 Norge ☐ 2 Annet land ☐ 3 Vet ikke ☐
8. **Morfar** 1 Norge ☐ 2 Annet land ☐ 3 Vet ikke ☐

+

9. **Hvor lenge har du bodd i Norge?** Hele livet ☐ Antall år

10. **Er du adoptert fra et annet land?** 1 ☐ Ja 2 ☐ Nei

11. **Er foreldrene dine skilt eller separert?** 1 ☐ Ja 2 ☐ Nei

Hvem bor du sammen med nå? (Du kan sette flere kryss dersom det passer for deg)

12. Mor og far ☐
13. Bare mor ☐
14. Mor og ny samboer / ektefelle ☐
15. Bare far ☐
16. Far og ny samboer / ektefelle ☐

17. Omtrent like mye hos mor og far ☐
18. Annen familie ☐
19. Fosterforeldre ☐
20. Annet ☐

21. **Hvor mange søsken har du?** 1 0 ☐ 2 1 ☐ 3 2 - 3 ☐ 4 4 - 5 ☐ 5 6 eller flere ☐

+

22. **Har du vært på besøk i det landet hvor foreldrene dine kommer fra?** 1 Nei ☐ 2 Ja, én gang ☐ 3 Ja, 2 - 3 ganger ☐ 4 Ja, 4 ganger eller mer ☐

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KULTUR OG KONTAKT

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Norskspråklige venner: Elever med to foreldre som er født i Norge

Tospråklige elever: Elever med to foreldre som er født i et annet land enn Norge

Din kultur: Landet/ kulturen foreldrene dine kommer fra

VENNER

Omtrent hvor mange venner har du nå for tiden som du kan stikke innom eller ringe til bare for å prate (nære venner) (Et kryss på hver linje)

	1	2	3	4	5
	Har ingen	1 venn	2 - 3 venner	4 - 6 venner	Mer enn 6
23. Norskspråkelige venner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. Venner fra samme kultur som deg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. Venner fra andre land og kulturer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Dersom du har venner fra samme kultur som deg, tenk på dem og svar på disse spørsmålene

	1	2	3	4
	Helt enig	Delvis enig	Delvis uenig	Helt uenig
26. <input type="checkbox"/> Jeg føler meg knyttet til vennene mine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. <input type="checkbox"/> Vennene mine legger vekt på mine meninger	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. <input type="checkbox"/> Jeg kan være til støtte for vennene mine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. <input type="checkbox"/> Jeg kan regne med vennene mine når jeg trenger hjelp	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Dersom du har norskspråklige venner, tenk på dem og svar på disse spørsmålene

	1	2	3	4
	Helt enig	Delvis enig	Delvis uenig	Helt uenig
30. <input type="checkbox"/> Jeg føler meg knyttet til vennene mine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. <input type="checkbox"/> Vennene mine legger vekt på mine meninger	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. <input type="checkbox"/> Jeg kan være til støtte for vennene mine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. <input type="checkbox"/> Jeg kan regne med vennene mine når jeg trenger hjelp	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Dersom du har foreldre som er født i et annet land enn Norge, skal du svare på spørsmålene som kommer nedenfor. Hvis foreldrene dine er født i Norge, kan du hoppe over disse spørsmålene og gå rett til spørsmål 72.

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Hvor lett er det for deg.....		1 Veldig vanskelig	2 Ganske vanskelig	3 Ganske lett	4 Veldig lett
34.	... å snakke norsk når du er sammen med norske venner?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35.	... å snakke på morsmålet ditt?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36.	... å bruke norsk når du arbeider med skolefagene?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38.	... å skrive på norsk?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39.	... å skrive på morsmålet ditt?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40.	... å få nye venner blant norskspråklige elever på skolen?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41.	... å få nye venner blant elever fra din kultur?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Du kan føle deg som medlem av ulike etniske eller kulturelle grupper. Du kan for eksempel føle deg som pakistaner, vietnameser eller somalier, og du kan føle at du er en del av et større samfunn som for eksempel Norge.

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Hvordan ser du på deg selv? (sett ett kryss for hver linje)		1 Helt enig	2 Delvis enig	3 Delvis uenig	4 Helt uenig
43.	Jeg ser på meg selv som norsk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44.	Jeg ser på meg selv som pakistaner/ vietnameser/ chilener/ iraner/ somaler/ annet...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46.	Jeg er glad for å være norsk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47.	Jeg er stolt av å være pakistaner/ vietnameser/ chilener/ iraner/somaler/ annet...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48.	Jeg er stolt av å være norsk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
53.	Jeg ser på meg selv som utlending	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
54.	Jeg ser på meg selv som innvandrер	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

+



Når folk med forskjellig bakgrunn er sammen, kan noen føle seg urettferdig behandlet. Følgende utsagn handler om dette.

(Sett ett kryss for hver linje)

		1	2	3	4
		Helt enig	Delvis enig	Delvis uenig	Helt uenig
55.	Jeg synes at andre har oppført seg urettferdig eller negativt overfor folk fra min kultur	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
56.	Jeg føler meg ikke akseptert av folk fra andre kulturer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
57.	Jeg føler at folk fra andre kulturer har i mot meg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
58.	Jeg har blitt ertet og fornærmet på grunn av min kulturelle bakgrunn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
59.	Jeg har blitt truet eller angrepet på grunn av min kulturelle bakgrunn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Har dette hendt deg?

(Sett et kryss på hver linje)

		1	2	3	4
		Nei, aldri	Ja, av og til	Ja, flere ganger	Ja, svært ofte
60.	Du har vært urolig for familiemedlemmer i landet foreldrene dine kommer fra	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
63.	Du har blitt kritisert av folk fra din kultur fordi du ikke kler deg passende	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
64.	Du har blitt skjelt ut av noen fra din kultur fordi du ikke kjenner tradisjonene godt nok	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Du og FAMILIEN DIN

Her kommer noen spørsmål om deg og familien din, hva dere gjør sammen, og hvordan dere har det sammen. Vær vennlig å svare så godt du kan på alle spørsmålene

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		1	2	3	4
		Helt enig	Delvis enig	Delvis uenig	Helt uenig
72.	Jeg føler meg knyttet til familien min	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
73.	Jeg blir tatt på alvor i familien min	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
74.	Familien min legger vekt på meningene mine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Når du tenker på familien din, vil du si at: (Sett ett kryss for hver linje)		1	2	3	4
		Helt enig	Delvis enig	Delvis uenig	Helt uenig
75.	Jeg betyr mye for familien min	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
76.	Jeg kan regne med familien min når jeg trenger hjelp	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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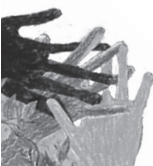
Hvordan opplever du foreldrene dine. Kryss av på hver linje for hvor godt du synes dette stemmer for deg.

Tenk på moren din:		1	2	3	4	5
		Nesten aldri	Sjelden	Av og til	Ofte	Nesten alltid
77.	Jeg kan stole på at hun hjelper meg hvis jeg har problemer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
78.	Hun oppmuntrer meg alltid til å gjøre mitt beste	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
79.	Hun oppmuntrer meg til å ta egne valg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
80.	Hun hjelper meg med skolearbeidet hvis det er noe jeg ikke forstår	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
81.	Når hun vil jeg skal gjøre noe, forklarer hun hvorfor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Tenk på faren din:		1	2	3	4	5
		Nesten aldri	Sjelden	Av og til	Ofte	Nesten alltid
82.	Jeg kan stole på at han hjelper meg hvis jeg har problemer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
83.	Han oppmuntrer meg alltid til å gjøre mitt beste	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
84.	Han oppmuntrer meg til å ta egne valg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
85.	Han hjelper meg med skolearbeidet hvis det er noe jeg ikke forstår	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
86.	Når han vil jeg skal gjøre noe, forklarer han hvorfor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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		1	2	3	4
	Hvor viktig er det for deg: (Sett ett kryss for hver linje)	Veldig viktig	Ganske viktig	Litt viktig	Ikke viktig i det hele tatt
88.	Å unngå krangling med andre medlemmer av familien	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
89.	Å sette familiens behov foran dine egne	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
90.	Å dele tingene (eiendelene) dine med andre i familien	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
91.	Å dele pengene dine med familien din	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
93.	At barn og ungdommer gjør som foreldrene sier, selv om de ikke er enige med dem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

HVORDAN ER ØKONOMIEN I FAMILIEN DIN

94. Hvor store problemer har familien din fordi foreldrene dine ikke har penger til å kjøpe ting som familien trenger eller ønsker seg?

1. ☐ Ikke noe problemer i det hele tatt
2. ☐ Litt problemer
3. ☐ Store problemer
4. ☐ Veldig store problemer

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96. Hvor lei seg eller bekymret er foreldrene dine fordi de ikke har nok penger?

1. ☐ Ikke i det hele tatt
2. ☐ Litt
3. ☐ Ganske mye
4. ☐ Veldig lei seg eller bekymret

+

95. Hvor ofte krangler foreldrene dine om at de ikke har nok penger?

1. ☐ Aldri
2. ☐ Nesten aldri
3. ☐ Av og til
4. ☐ Ofte
5. ☐ Alltid

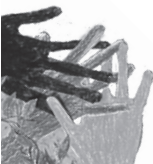
97. Hvor ofte krangler du med foreldrene dine om at dere ikke har nok penger?

1. ☐ Aldri
2. ☐ Nesten aldri
3. ☐ Av og til
4. ☐ Ofte
5. ☐ Hele tiden

DISSE SPØRSMÅLENE HANDLER OM HVORDAN DU OPPLEVER FORELDRENE DINE. +

Kryss av på hver linje på det svaret som best passer for deg og dine foreldre.

		1	2	3	4	5	6
		Aldri	Veldig sjelden	Sjelden	Noen ganger	Oftre	Alltid
98.	Foreldrene mine merker at jeg er lei meg selv om jeg ikke forteller det til dem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
99.	Foreldrene mine er mer opptatt av hvor flink jeg er i forhold til andre barn enn av hva jeg faktisk får til	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
100.	Jeg føler at foreldrene mine er stolte av meg når jeg får til ting jeg holder på med	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
101.	Foreldrene mine er redde for at det skal skje meg noe. Derfor får jeg ikke lov å gjøre ting andre ungdommer får lov til	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
102.	Foreldrene mine straffer meg hardt, selv for småting +	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
103.	Jeg føler at foreldrene mine blir lei seg når de blir sinte på meg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
104.	Når jeg gjør noe galt blir ikke foreldrene mine sinte med en gang, men forsøker å forstå hvorfor jeg gjorde det	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
105.	Jeg ønsker foreldrene mine ville bekymre seg litt mindre for hva jeg gjør	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
106.	Foreldrene mine ser triste ut eller viser på andre måter at jeg har oppført meg dårlig, slik at jeg får virkelig skyldfølelse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
107.	Foreldrene mine behandler meg på en slik måte at jeg føler meg skamfull	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
108.	Foreldrene mine forsøker å oppmuntre meg til å bli best	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
109.	Det hender at foreldrene mine straffer meg mer enn jeg fortjener	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
110.	Hvis jeg opplever motgang, føler jeg at mine foreldre forsøker å trøste og oppmuntre meg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
111.	Foreldrene mine advarer meg oftere mot farer enn andre foreldre gjør mot sine barn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



+

		1	2	3	4	5	6
		Aldri	Veldig sjelden	Sjelden	Noen ganger	Ofte	Alltid
112.	Mine foreldre passer mer på meg og er reddere for meg enn andre foreldre er for sine barn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
113.	Det er alltid jeg som får skylden for ting i familien vår	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
114.	Jeg synes at mine foreldre forsøker å gjøre livet mitt interessant og lærerikt (for eksempel ved å gi meg gode bøker, ta meg med på reiser, og oppmuntre meg til å ha hobbyer)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
115.	Foreldrene mine sammenligner mine karakterer med karakterene til vennene mine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
116.	Foreldrene mine får meg til å kle godt på meg fordi de er redde for at jeg skal bli kald	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
117.	Foreldrene mine gir meg ros	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
118.	Foreldrene mine kritiserer meg og sier jeg er håpløs og lat mens andre hører det	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
119.	Jeg føler at foreldrene mine liker mine søsken bedre enn de liker meg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
120.	Jeg synes at foreldrene mine er mye reddere enn andres foreldre for at det skal skje meg noe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
121.	Jeg føler at det er varme og kjærlighet mellom meg og mine foreldre	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
122.	Jeg må alltid si fra hvor jeg er, selv om det er midt på dagen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
123.	Foreldrene mine viser med ord og handlinger at de liker meg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
124.	Foreldrene mine bruker andre ungdommer som eksempler for å vise hvordan man burde oppføre seg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
125.	Det hender at foreldrene mine er sure eller sinte uten at jeg får vite hvorfor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
126.	Foreldrene mine sammenligner karakterene mine med karakterene til mine søsken og andre slektninger	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

+



Hvor viktig er din innsats for foreldrene dine?

		1	2	3	4	5
		Aldri	Stelden	Av og til	Ofte	Alltid
	+					
127.	Mine foreldre følger nøye med på hvordan jeg hvordan jeg gjør det på skolen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
128.	Mine foreldre mener at å gjøre det bra på skolen er noe av det viktigste som finnes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
129.	Mine foreldre sier at jeg skal jobbe hardt med alt jeg gjør	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
130.	Mine foreldre spør meg ofte om skolearbeidet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Dersom du har søsken vil vi at du skal svare på disse spørsmålene om hvordan dere har det sammen.

Dersom du har flere søsken, kan du tenke på den som er nærmest deg i alder.

131. Hvor ofte gjør du og din bror/søster ting sammen?

- 1 ☐ Nesten aldri
- 2 ☐ Ikke så ofte
- 3 ☐ Av og til
- 4 ☐ Veldig ofte

132. Hvor mye har du og din bror/søster til felles?

- 1 ☐ Nesten ingen ting
- 2 ☐ Ikke så mye
- 3 ☐ Litt
- 4 ☐ Veldig mye

+

VET FORELDRENE DINE HVOR DU ER?

Har noe av dette hendt deg i løpet av den siste måneden?

		1	2	3	4	5
		Nei	Svært få ganger denne måneden	Noen ganger denne måneden	Minst en gang i uken	Flere ganger i uken
134.	At foreldrene dine har tatt kontakt med foreldrene til vennene dine, for å sjekke hvor du er og hva du gjør?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

+

DINE STERKE OG SVAKE SIDER



+

Hvordan har du hatt det den siste måneden?

Sett et kryss på hver linje for det svaret som passer best for deg, selv om du synes setningen er litt rar.

	+	1 Stemmer ikke	2 Stemmer delvis	3 Stemmer helt
135.	Jeg prøver å være hyggelig mot andre. Jeg bryr meg om hva de føler	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
136.	Jeg er rastløs. Jeg kan ikke være lenge i ro	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
137.	Jeg har ofte hodepine, vondt i magen eller kvalme	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
138.	Jeg deler gjerne med andre (mat, spill, andre ting)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
139.	Jeg blir ofte sint og har kort lunte	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
140.	Jeg er ofte for meg selv. Jeg gjør som regel ting alene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
141.	Jeg gjør som regel det jeg får beskjed om	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
142.	Jeg bekymrer meg mye	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
143.	Jeg stiller opp hvis noen er såret, lei seg eller føler seg dårlig	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
144.	Jeg er stadig urolig eller i bevegelse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
145.	Jeg har en eller flere gode venner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
146.	Jeg slåss mye. Jeg kan få andre til å gjøre det jeg vil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
147.	Jeg er ofte lei meg, nedfor eller på gråten	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
148.	Jeg blir som regel likt av andre på min alder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
149.	Jeg blir lett distraheret, jeg synes det er vanskelig å konsentrere meg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
150.	Jeg blir nervøs i mange situasjoner. Jeg blir lett usikker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
151.	Jeg er snill mot de som er yngre enn meg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
152.	Jeg blir ofte beskyldt for å jukse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
153.	Andre barn eller unge plager eller mobber meg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
154.	Jeg tilbyr meg ofte å hjelpe andre (foreldre, lærere, andre barn/unge)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



		1	2	3 +
		Stemmer ikke	Stemmer delvis	Stemmer helt
155.	Jeg tenker meg om før jeg handler (gjør noe)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
156.	Jeg tar ting som ikke er mine hjemme, på skolen eller andre steder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
157.	Jeg kommer bedre over ens med voksne enn de på min egen alder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
158.	Jeg er redd for mye, blir lett skremt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
159.	Jeg fullfører oppgaver. Jeg er god til å konsentrere meg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

160. **Syns du at du har vansker med følelser, med konsentrasjon, med oppførsel eller med å komme overens med andre mennesker?**

1	<input type="checkbox"/> Nei	
2	<input type="checkbox"/> Ja - små vansker	
3	<input type="checkbox"/> Ja - tydelige vansker	
4	<input type="checkbox"/> Ja - alvorlige vansker	

Hvis du har svart "nei" på forrige spørsmål, kan du hoppe til spørsmål 190.
Hvis du har svart "ja", vennligst svar på følgende spørsmål:

161. **Hvor lenge har disse vanskene vært til stede?**

+

1	<input type="checkbox"/> Mindre enn en måned	
2	<input type="checkbox"/> 1-5 måneder	
3	<input type="checkbox"/> 6-12 måneder	
4	<input type="checkbox"/> Mer enn ett år	



+

162. Forstyrrer eller plager vanskene deg?

1	<input type="checkbox"/>	Ikke i det hele tatt	~~~~~
2	<input type="checkbox"/>	Bare litt	~~~~~
3	<input type="checkbox"/>	En god del	~~~~~
4	<input type="checkbox"/>	Mye	~~~~~

Virker vanskene inn på livet ditt på noen av disse områdene?

	1	2	3	4
	Ikke i det hele tatt	Bare litt	En god del	Mye
163. Hjemme/ i familien	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
164. Forhold til venner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
165. Læring på skolen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
166. Fritidsaktiviteter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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167. Er vanskene en belastning for de rundt deg (familie, venner, lærere osv.)?

1	<input type="checkbox"/>	Ikke i det hele tatt
2	<input type="checkbox"/>	Bare litt
3	<input type="checkbox"/>	En god del
4	<input type="checkbox"/>	Mye

+



HVA TENKER DU?

Hva slags **store, dramatiske** hendelser har du opplevd det siste året?

	1	2
	Ja	Nei
190. Foreldrene mine er blitt skilt / separert	<input type="checkbox"/>	<input type="checkbox"/>
191. Jeg er blitt frastjålet noe verdifullt	<input type="checkbox"/>	<input type="checkbox"/>
192. Jeg er blitt overfalt / slått ned eller liknende	<input type="checkbox"/>	<input type="checkbox"/>
193. Jeg er blitt tatt for å ha gjort noe galt (stjålet eller liknende)	<input type="checkbox"/>	<input type="checkbox"/>



		1 Ja	2 Nei	+
194.	Noen jeg var glad i er død (slektning eller god venn)	<input type="checkbox"/>	<input type="checkbox"/>	
195.	Faren eller moren min har mistet jobben	<input type="checkbox"/>	<input type="checkbox"/>	
196.	Jeg har mistet kjæledyret mitt	<input type="checkbox"/>	<input type="checkbox"/>	
197.	Jeg har vært alvorlig skadet eller syk	<input type="checkbox"/>	<input type="checkbox"/>	
198.	Noen jeg er glad i har vært alvorlig skadet eller syk	<input type="checkbox"/>	<input type="checkbox"/>	
199.	Noen av mine nærmeste er tatt av politiet	<input type="checkbox"/>	<input type="checkbox"/>	
200.	Det har skjedd noe jeg ikke orker fortelle om til noen	<input type="checkbox"/>	<input type="checkbox"/>	

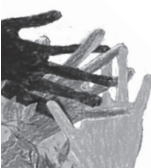
Nedenfor har vi listet opp noen problemer som mange barn og ungdommer opplever.

+

Tenk på det siste året, og kryss av på hver linje for hvor ofte du har opplevd disse problemene.

		1 Nei, aldri	2 Ja, av og til	3 Ja, flere ganger	4 Ja, svært ofte
201.	Foreldrene mine er mye borte hjemmefra (pga. jobb eller annet)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
202.	Jeg har for mye ansvar hjemme (for småsøsken, husarbeid eller liknende)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
203.	Jeg hører at foreldrene mine krangler	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
204.	Foreldrene mine slåss med hverandre	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
205.	Jeg har blitt uvenner med noen jeg pleide å være sammen med	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
206.	Jeg er redd for ikke å være flink nok på skolen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
207.	Bekymringer fordi noen i familien bruker for mye alkohol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
208.	Bekymringer fordi noen i familien er lei seg eller oppgitt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
209.	Krangler eller konflikter med mor eller far	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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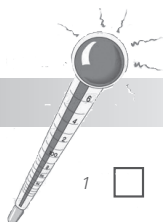


		1	2	3	4
	+	Nei, aldri	Ja, av og til	Ja, flere ganger	Ja, svært ofte
210.	Store vansker med å forstå læreren når han/hun underviser	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
211.	Bekymringer fordi en av mine søsken er i alvorlige vanskeligheter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
213.	Stort press fra omgivelsene for å lykkes og gjøre det bra på skolen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
214.	Problemer i forhold til en eller flere lærere	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
217.	Krangler eller andre problemer med noen i klassen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
218.	Problemer fordi foreldrene mine er strengere enn andre foreldre	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

HVORDAN ER HELSEN DIN?

219. Plages du ofte med smerter i kroppen?

1 ☐ Ja 2 ☐ Nei



Hvis nei, gå til spørsmål 225.

Hvis Ja, prøv å angi hvor ofte du har vondt (ved å sette kryss):

		1	2	3	
	Hvor ofte har du vondt i:	Hver dag, eller nesten hver dag	1 - 3 ganger pr. uke	1 - 3 ganger pr. måned	+
220.	Hodet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
221.	Magen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
222.	Ryggen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
223.	Armer / ben	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
224.	Andre steder, hvor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

+

225. Har du noen gang prøvd å slanke deg?

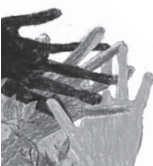
1 ☐ Nei, aldri 2 ☐ Ja, tidligere 3 ☐ Ja, hele tiden



HVORDAN ER DU SAMMEN MED ANDRE?

Sett et kryss på hver linje for det svaret som best passer for deg

		1	2	3	4	5
	+	Aldri	Sjelden	Av og til	Ofta	Svært ofte
700.	Jeg viser at jeg liker å få ros av vennene mine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
701.	Jeg spør før jeg bruker noe som tilhører andre	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
702.	Jeg synes synd på andre når de opplever noe trist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
703.	Jeg sier ifra til andre når jeg er sint på dem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
704.	Jeg hører etter når de voksne snakker til meg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
705.	Jeg hører på når vennene mine forteller om problemene sine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
706.	Jeg unngår å bli med på noe som de voksne kan bli sinte for	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
707.	Jeg roser andre når jeg synes de har gjort noe bra	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
708.	Jeg starter gjerne en samtale med klassekamerater	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
709.	Jeg prøver å forstå hvordan vennene mine har det når de er sinte, fortvilte eller triste	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
710.	Jeg bruker fritiden min til hobbyer og andre interesser jeg har	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
711.	Jeg får lett venner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
712.	Jeg smiler, vinker eller nikker når jeg møter noen jeg kjenner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
713.	Jeg kan være uenig med voksne uten å krangle	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
714.	Jeg forteller hva jeg heter når jeg treffer nye mennesker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
715.	Jeg kontrollerer sinnet mitt når noen blir sinte på meg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



		1	2	3	4	5
	+	Aldri	Sjelden	Av og til	Oftre	Svært ofte
716.	Jeg sier ifra når jeg mener at regler er urettferdige	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
717.	Jeg avslutter krangler med mine foreldre på en rolig måte	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
718.	Jeg spør om vennene kan hjelpe meg når jeg har problemer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
719.	Jeg gjør leksene ferdig til tiden	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
720.	Jeg følger med når læreren underviser	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
721.	Jeg blir ferdig med arbeidsoppgaver i klassen når jeg skal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
722.	Jeg spør om klassekameratene mine vil være med på det jeg driver med	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
723.	Jeg snakker i en hyggelig tone når vi diskuterer noe i klassen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
724.	Jeg synes det er ganske vanskelig å få venner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
725.	Andre ungdommer har vanskelig for å like meg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

+

		1	2	3	4	5
	Hvor flink er du til...	Ikke flink i det hele tatt	Ikke så veldig flink	Passe flink	Ganske flink	Veldig flink
248.	... å si dine meninger når klassekameratene er uenige med deg?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
249.	... å si i fra når du føler at du blir urettferdig behandlet?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
250.	... å takle situasjoner hvor andre irriterer deg eller sårer deg?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
251.	... å være bestemt overfor noen som ber deg om å gjøre noe urimelig eller upassende?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



BRUDD PÅ REGLER

Har du gjort, eller vært med på, noe av dette i løpet av det siste året?

		1	2	3	4	5
	BRUDD					
	+	Ikke gjort det	Gjort det 1 gang	Gjort det 2-3 ganger	Gjort det 4-10 ganger	Gjort det mer enn 10 ganger
256.	Tatt penger fra noen uten lov	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
257.	Tatt varer fra kjøpesenter, butikk eller kiosk uten å betale	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
258.	Stjålet ting fra noens lommer eller veske, når eieren ikke var til stede	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
259.	Brutt deg inn i en butikk, hus eller leilighet, for å stjele noe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
260.	Truet med å slå eller skade noen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
261.	Vært i slåsskamp på skolen eller andre steder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
262.	Slått eller sparket noen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
263.	Truet eller tvunget noen til å gi deg penger eller andre ting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

+

HVORDAN OPPLEVER DU DEG SELV SOM PERSON?

Her er beskrivelser av hvordan folk kan oppleve seg selv og hvordan de kan ha det. Kryss av slik det stemmer best for deg: (Husk å sette ett kryss på hver linje.)

		1	2	3	4	5
	+					
		Stemmer veldig godt	Stemmer ganske godt	Både/og	Stemmer ganske dårlig	Stemmer veldig dårlig
264.	Jeg liker å være sammen med andre mennesker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
265.	Jeg gir ikke opp selv om jeg jobber med en vanskelig oppgave	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
266.	Jeg er vanligvis på farten	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
267.	Jeg blir lett skremt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
268.	Jeg blir ofte lei meg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
269.	Når jeg ikke er fornøyd sier jeg fra med én gang	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

		1	2	3	4	5
	+	Stemmer veldig gott	Stemmer ganske gott	Både/og	Stemmer ganske dårlig	Stemmer veldig dårlig
270.	Jeg trives best alene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
271.	Selv om jeg blir avbrutt, fortsetter jeg med oppgavene mine (som lekser og husarbeid) etterpå	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
272.	Jeg liker å gjøre noe hele tiden	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
273.	Jeg regnes for å være temperamentsfull og hissig	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
274.	Jeg blir ofte irritert	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
275.	Jeg jobber med en oppgave helt til den er fullført	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
276.	Jeg gjør mange ting hele tiden	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
277.	Vanlige hendelser plager og bekymrer meg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
278.	Jeg har problemer med å gjøre ting ferdig	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
279.	Jeg føler meg ofte usikker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
280.	Det er mange ting som irriterer meg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
281.	Når jeg blir skremt får jeg nesten panikk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
282.	Jeg vil heller jobbe sammen med andre enn å jobbe alene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
283.	Jeg blir fort opprørt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
284.	Jeg føler meg ofte fylt av energi	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
285.	Det skal mye til for å gjøre meg sint	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
286.	Jeg er mindre engstelig for ting enn mine jevnaldrende	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
287.	Jeg synes mennesker er mer spennende enn noe annet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
288.	Jeg skifter lett fra en aktivitet til en annen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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NÅ SKAL VI GÅ OVER TIL Å SPØRRE DEG LITT OM HVORDAN DU HAR DET PÅ SKOLEN, OG SAMMEN MED VENNENE DINE

289. Alt i alt, hvor godt trives du på skolen?

1	2	3	4	5
Ikke i det hele tatt	Dårlig	Verken godt eller dårlig	Godt	Veldig godt
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	1	2	3	4	5
Hvor flink er du i	Ikke flink i det hele tatt	Ikke så flink	Passe	Ganske flink	Veldig flink
290. Matte	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
291. Norsk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Hvis du skal sette opp en liste over alle elevene i klassen din, fra den dårligste til den beste, hvor ville du plassere deg selv?

	1	2	3	4	5
	Mye dårligere enn andre elever	Litt dårligere enn andre elever	Omtrent som andre	Litt flinkere enn andre elever	Mye flinkere enn andre elever
292. Matte	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
293. Norsk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Hvor hardt jobber du med:

	1	2	3	4	5
	Ikke hardt i det hele tatt	Ikke så hardt	Passe	Ganske hardt	Veldig hardt
294. Matte	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
295. Norsk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

296. **Hvor mange elever i klassen din har foreldre som kommer fra samme land som dine foreldre**

+ 1 ☐ Ingen 2 ☐ 1 3 ☐ 2 - 3 4 ☐ 4 - 5 5 ☐ 6 eller flere

Hvordan er det i klassen din?		1	2	3
		Enig	Delvis enig	Uenig
297.	Elevene arbeider hardt i timene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
298.	Det er god arbeidsro i timene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
299.	Det er mye rot og bråk i timene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
300.	Klassen er ofte i et eneste kaos	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
301.	Elevene baksnakker hverandre	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
302.	Når vi har harde diskusjoner blir det ofte uvennskap i klassen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
303.	Elevene sprer stygge rykter om hverandre	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
304.	Det er godt vennskap mellom elevene i klassen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
305.	Læreren behandler tospråklige elever urettferdig eller negativt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
306.	Det er grupper i klassen som ikke går særlig godt sammen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
307.	I vår klasse får alle elevene som trenger det like mye hjelp av læreren	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
308.	Det er elever i klassen som blir mobbet av klassekameratene	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
309.	Det er elever i klassen som blir mobbet av andre elever på skolen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Nedenfor er det beskrevet handlinger som har å gjøre med brudd på regler på skolen, men som mange allikevel gjør.

Har du vært med på/gjort noe av dette det siste året (12 månedene)?

(kryss av på hver linje)

+		1	2	3	4
		Aldri	1 gang	2 - 5 ganger	Mer enn 5 ganger
310.	Hatt voldsom krangel med lærer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
311.	Blitt sendt ut av klasserommet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
312.	Bannet til en lærer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
313.	Blitt innkalt til rektor for noe galt du har gjort	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
314.	Skulket, timer eller dager	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

+

HVORDAN DU HAR DET I KLASSEN DIN

		1	2	3	4
		Helt enig	Delvis enig	Delvis uenig	Helt uenig
315.	Jeg trives i klassen min	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
316.	Elevene i klassen gir meg råd når jeg trenger det	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
319.	Jeg føler meg knyttet til klassen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
320.	Klassen legger vekt på mine meninger	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
321.	Elevene i klassen hjelper meg med skolearbeidet når jeg trenger det	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
322.	Elevene i klassen min godtar meg slik jeg er	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

+

HVORDAN ER LÆRERNE DINE?

	1	2	3	4	5	6
Lærerne mine...	Aldri	Nesten aldri	Noen ganger	Som oftest	Nesten alltid	Alltid
323. ... behandler meg rettferdig.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
324. ...gjør at det er ok å stille spørsmål	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
325. ...roser meg når jeg har gjort noe bra	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
326. ...forteller meg det på en pen måte når jeg har gjort en feil	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
327. ...godtar meg slik jeg er	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
328. ...bruker tid på meg når jeg trenger hjelp	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
329. ... hjelper meg med personlige problemer hvis jeg trenger det	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Nå har du svart på veldig mange spørsmål om deg selv, familien din og hvordan du har det på skolen. Du må gjerne skrive til oss og fortelle hvordan du synes det er å være med i UngKul!

Tusen takk for hjelpen!

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Vennlig hilsen
Brit Oppedal,
Prosjektleder



